



# STIC Search Report

EIC 1700

STIC Database Tracking Number: 196986

**TO:** Sandra Poulos  
**Location:** REM 10D18  
**Art Unit :** 1714  
**August 2, 2006**

**Case Serial Number:** 10/760512

**From:** Kathleen Fuller  
**Location:** EIC 1700  
**REMSEN 4B28**  
**Phone:** 571/272-2505  
**Kathleen.Fuller@uspto.gov**

## Search Notes

Too many structures for the hydrotalcites so I had to limit with polyurethanes.



# STIC Search Results Feedback Form

EIC17000

Questions about the scope or the results of the search? Contact the EIC searcher or contact:

Kathleen Fuller, EIC 1700 Team Leader  
571/272-2505 REMSEN 4B28

Voluntary Results Feedback Form

- > I am an examiner in Workgroup:  Example: 1713
- > Relevant prior art found, search results used as follows.
- 102 rejection
  - 103 rejection
  - Cited as being of interest.
  - Helped examiner better understand the invention.
  - Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- Foreign Patent(s)
- Non-Patent Literature  
(journal articles, conference proceedings, new product announcements etc.)

> Relevant prior art not found:

- Results verified the lack of relevant prior art (helped determine patentability).
- Results were not useful in determining patentability or understanding the invention

Comments:

Anekwe, Imelda (ASRC)

146486

From: SANDRA Poulos [sandra.poulos@uspto.gov]  
Sent: Saturday, July 29, 2006 1:13 PM  
To: STIC-EIC1700  
Subject: Database Search Request, Serial Number: 10/760,512

Requester:  
SANDRA Poulos (P/1714)

Art Unit:  
GROUP ART UNIT 1714

Employee Number:  
81697

Office Location:  
REM 10D18

Phone Number:  
(571) 272-6428

Mailbox Number:

Case serial number:  
10/760,512

Class / Subclass(es):  
523/210

Earliest Priority Filing Date:  
01/24/2003

Format preferred for results:  
Paper

Search Topic Information:  
Please search for the hydrotalcite in formulas 1 and 2, preferably the formulas 3-6 in claims 5 and 6. If there are a lot of hits for those formulas, then search with the limitation that there is polyurethane in the composition. Thanks.

Special Instructions and Other Comments:

ENTITLED REFERENCE BY  
Sci & Tech Inf. Ctr

JUL 3

Pat. & T.M. Off

=> FILE REG

FILE 'REGISTRY' ENTERED AT 14:36:10 ON 02 AUG 2006  
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STRUCTURE FILE UPDATES: 1 AUG 2006 HIGHEST RN 897851-29-5  
DICTIONARY FILE UPDATES: 1 AUG 2006 HIGHEST RN 897851-29-5

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TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

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<http://www.cas.org/ONLINE/UG/regprops.html>

=> FILE HCAPLU

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FILE COVERS 1907 - 2 Aug 2006 VOL 145 ISS 6  
FILE LAST UPDATED: 1 Aug 2006 (20060801/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> D QUE

L3 4048 SEA FILE=REGISTRY ABB=ON (MG(L)AL(L)O(L)H)/ELS  
L5 2179 SEA FILE=REGISTRY ABB=ON L3 NOT 3-400/M  
L9 17 SEA FILE=REGISTRY ABB=ON HYDROTALCITE  
L11 16324 SEA FILE=HCAPLUS ABB=ON L5  
L12 2588 SEA FILE=HCAPLUS ABB=ON L9  
L13 16343 SEA FILE=HCAPLUS ABB=ON L11 OR L12  
L15 148 SEA FILE=HCAPLUS ABB=ON L13 AND FIBER?/SC,SX  
L17 73135 SEA FILE=REGISTRY ABB=ON POLYURETHANE/PCT

*Covers formulas  
of claims*

L18 42913 SEA FILE=HCAPLUS ABB=ON L17  
 L21 45 SEA FILE=HCAPLUS ABB=ON L15 AND (L18 OR POLYURETHAN?)

=> D L21 IBIB ABS IND HITSTR 1-45

L21 ANSWER 1 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2006:598136 HCAPLUS  
 DOCUMENT NUMBER: 145:84833  
 TITLE: Treatment method for polyurethane elastomer  
 fibers for chlorine-embrittlement resistance and  
 manufacture of dyed elastic cloths for swimming suits  
 INVENTOR(S): Suzuki, Katsuya; Uemura, Hiroshi; Umesawa, Masao  
 PATENT ASSIGNEE(S): Opelon tex Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 22 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006161239	A2	20060622	JP 2004-357948	20041210
PRIORITY APPLN. INFO.:			JP 2004-357948	20041210
AB	Title treatment method is characterized in treating polyurethane elastic fibers containing 0.1-10% compds. selected from hydrotalcite and Zn, Mg, or Al oxide (composites) or hydroxides with solns. containing hindered phenols having mol. weight of ≥300 to a preferable deposit content of 0.1-10%. A 3% ZnO-containing Et2NH-terminated ethylenediamine-MDI-PTMG copolymer-based solution was spun and treated with a solution containing Hostanox O 3 to a 0.9% deposit to form fibers showing Cl embrittlement resistance (3-ppm Cl, 28°, 5-g load) for 219 h; the fibers were used along with dyeable polyester fibers to form a dyed tricot fabric with Cl embrittlement resistance 215 h.			
CC	40-7 (Textiles and Fibers)			
ST	chlorine embrittlement resistance spandex fiber hindered phenol treatment; swimming suit fabric spandex fiber hindered phenol treatment			
IT	Polyamide fibers, uses Polyester fibers, uses RL: TEM (Technical or engineered material use); USES (Uses) (composite cloths with treated spandex fibers; sp. metal compound-containing spandex fibers treated with hindered phenols for Cl-embrittlement resistance for fabrics for swimming suits)			
IT	Phenols, uses RL: MOA (Modifier or additive use); USES (Uses) (hindered; sp. metal compound-containing spandex fibers treated with hindered phenols for Cl-embrittlement resistance for fabrics for swimming suits)			
IT	Hydroxides (inorganic) Oxides (inorganic), uses RL: TEM (Technical or engineered material use); USES (Uses) (in fibers; sp. metal compound-containing spandex fibers treated with hindered phenols for Cl-embrittlement resistance for fabrics for swimming suits)			
IT	Spandex fibers RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)			

(monoalc.-terminated; sp. metal compound-containing spandex fibers treated with hindered phenols for Cl-embrittlement resistance for fabrics for swimming suits)

## IT Spandex fibers

RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
 (polyurea-, monoamine-terminated; sp. metal compound-containing spandex fibers treated with hindered phenols for Cl-embrittlement resistance for fabrics for swimming suits)

## IT Clothing

(swimwear; sp. metal compound-containing spandex fibers treated with hindered

phenols for Cl-embrittlement resistance for fabrics for swimming suits)

IT 109-89-7DP, Diethylamine, reaction product with copolymer of MDI and PTMG and ethylene diamine 9053-66-1DP, Ethylenediamine-MDI-PTMG copolymer, reaction product with diethylamine 35296-72-1DP, Butanol, reaction product with copolymer of MDI and PTMG and ethylene glycol 161729-90-4DP, Ethylene glycol-MDI-PTMG copolymer, reaction product with butanol

RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
 (elastic, fiber; sp. metal compound-containing spandex fibers treated with hindered phenols for Cl-embrittlement resistance for fabrics for swimming suits)

IT 1309-42-8, Magnesium hydroxide 1309-48-4, Magnesia, uses 1314-13-2, Zinc oxide, uses 1344-28-1, Alumina, uses 12304-65-3, Hydrotalcite 20427-58-1, Zinc hydroxide 21645-51-2, Aluminum hydroxide, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
 (in fibers; sp. metal compound-containing spandex fibers treated with hindered phenols for Cl-embrittlement resistance for fabrics for swimming suits)

IT 85-60-9, Lowinox 44B25 1843-03-4, 1,1,3-Tris(2-methyl-5-tert-butyl-4-hydroxyphenyl)butane 32509-66-3, Hostanox O 3  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (sp. metal compound-containing spandex fibers treated with hindered phenols for Cl-embrittlement resistance for fabrics for swimming suits)

IT 9053-66-1DP, Ethylenediamine-MDI-PTMG copolymer, reaction product with diethylamine 161729-90-4DP, Ethylene glycol-MDI-PTMG copolymer, reaction product with butanol  
 RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
 (elastic, fiber; sp. metal compound-containing spandex fibers treated with hindered phenols for Cl-embrittlement resistance for fabrics for swimming suits)

RN 9053-66-1 HCAPLUS

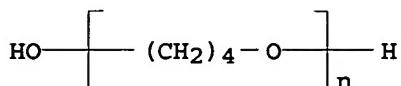
CN 1,2-Ethanediamine, polymer with  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX NAME)

CM 1

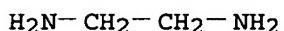
CRN 25190-06-1

CMF (C4 H8 O)n H2 O

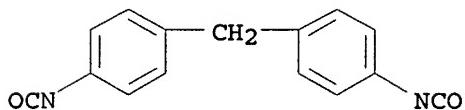
CCI PMS



CM 2

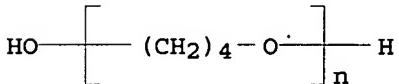
CRN 107-15-3  
CMF C2 H8 N2

CM 3

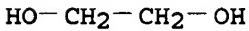
CRN 101-68-8  
CMF C15 H10 N2 O2

RN 161729-90-4 HCAPLUS  
 CN 1,2-Ethanediol, polymer with  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX NAME)

CM 1

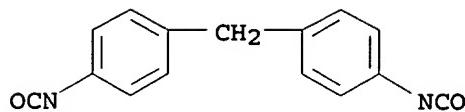
CRN 25190-06-1  
CMF (C4 H8 O)n H2 O  
CCI PMS

CM 2

CRN 107-21-1  
CMF C2 H6 O2

CM 3

CRN 101-68-8  
CMF C15 H10 N2 O2



IT 12304-65-3, Hydrotalcite

RL: TEM (Technical or engineered material use); USES (Uses)  
(in fibers; sp. metal compound-containing spandex fibers treated with  
hindered phenols for Cl-embrittlement resistance for fabrics for  
swimming suits)

RN 12304-65-3 HCAPLUS

CN Hydrotalcite (Mg<sub>6</sub>(CO<sub>3</sub>)<sub>2</sub>(OH)<sub>4</sub>·4H<sub>2</sub>O) (9CI) (CA INDEX NAME)

CM 1

CRN 11097-59-9

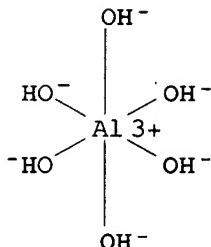
CMF C O<sub>3</sub> . 2 Al H<sub>6</sub> O<sub>6</sub> . 4 H O . 6 Mg

CM 2

CRN 18893-33-9

CMF Al H<sub>6</sub> O<sub>6</sub>

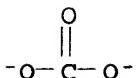
CCI CCS



CM 3

CRN 3812-32-6

CMF C O<sub>3</sub>



L21 ANSWER 2 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2006:566764 HCAPLUS

DOCUMENT NUMBER: 145:47222

TITLE: Stretchable woven fabrics with good retention of stretch properties after the bleaching step, comprising polyurethane elastic fibers containing metal complex oxides and stretchable woven products and bleached stretchable denims therefrom

INVENTOR(S) : Kataoka, Keiichi; Nishizawa, Akira  
 PATENT ASSIGNEE(S) : Asahi Kasei Fibers Corporation, Japan  
 SOURCE: PCT Int. Appl., 15 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006062052	A1	20060615	WO 2005-JP22280	20051205
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

PRIORITY APPLN. INFO.: JP 2004-352839 A 20041206

AB The stretchable fabrics (A1) partially comprise polyurethane elastic fibers containing ≥2 types of metals from Mg, Al, and Zn, or the stretchable fabric comprise above A1 fabrics having metal element content of the polyurethane elastic fibers 0.5-10%, or the stretchable fabric comprise above A1 fabrics containing complex oxides or complex oxide compds. of ≥2 types of metals. Spun polyurethane elastic fibers from a polyether-type polyurethane having polytetramethylene glycol as the raw material, and containing 0.5% hydrotalcite [Mg<sub>4.5</sub>Al<sub>2</sub>(OH)<sub>13</sub>CO<sub>3</sub>.3.5H<sub>2</sub>O] and having stretch ratio as the core and cotton as the sheath yarn were twisted to give core-spun yarns. A woven twill comprising indigo-dyed cotton yarns as the warp yarn and the core-spun yarns as the filling yarn was prepared, and made into a jeans showing stretch 37.0 and 36.0%, resp., and stretch recovery after 30 s, 72.0 and 72.0%, resp., and stretch recovery after 1 h. 80.0 and 76.2%, resp., on bleaching the jeans with an aqueous solution (effective Cl content 6%) containing NaOCl for 10 min and 30 min, resp.

CC 40-2 (Textiles and Fibers)

ST polyurethane elastic fiber hydrotalcite denim bleaching stretchability retention enhancement; cotton polyurethane fiber blend denim bleaching stretchability retention enhancement

IT Yarns

(cotton, sheath yarn; stretchable woven fabrics with good retention of stretch properties after the bleaching step, comprising polyurethane elastic fibers containing metal complex oxides)

IT Textiles

(denim; stretchable woven fabrics with good retention of stretch properties after the bleaching step, comprising polyurethane elastic fibers containing metal complex oxides)

IT Polyurethane fibers

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(polyether-, core yarn; stretchable woven fabrics with good retention of stretch properties after the bleaching step, comprising polyurethane elastic fibers containing metal complex oxides)

IT Synthetic polymeric fibers, uses  
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(polyether-polyurethanes, core yarn; stretchable woven fabrics with good retention of stretch properties after the bleaching step, comprising polyurethane elastic fibers containing metal complex oxides)

IT Bleaching  
(stretchable woven fabrics with good retention of stretch properties after the bleaching step, comprising polyurethane elastic fibers containing metal complex oxides)

IT Polyurethane fibers  
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(stretchable woven fabrics with good retention of stretch properties after the bleaching step, comprising polyurethane elastic fibers containing metal complex oxides)

IT Oxides (inorganic), uses  
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)  
(stretchable woven fabrics with good retention of stretch properties after the bleaching step, comprising polyurethane elastic fibers containing metal complex oxides)

IT 7681-52-9, Sodium hypochlorite  
RL: NUU (Other use, unclassified); USES (Uses)  
(bleaching agent; stretchable woven fabrics with good retention of stretch properties after the bleaching step, comprising polyurethane elastic fibers containing metal complex oxides)

IT 25190-06-1D, Polytetramethylene glycol, polyurethanes  
100493-52-5D, 2,2-Dimethyl-1,3-propanediol-tetramethylene oxide copolymer, polyurethanes  
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(fiber; stretchable woven fabrics with good retention of stretch properties after the bleaching step, comprising polyurethane elastic fibers containing metal complex oxides)

IT 131494-77-4 153977-21-0, Aluminum zinc oxide (Al<sub>2</sub>Zn<sub>4</sub>O<sub>7</sub>)  
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)  
(stretchable woven fabrics with good retention of stretch properties after the bleaching step, comprising polyurethane elastic fibers containing metal complex oxides)

IT 131494-77-4  
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)  
(stretchable woven fabrics with good retention of stretch properties after the bleaching step, comprising polyurethane elastic fibers containing metal complex oxides)

RN 131494-77-4 HCAPLUS

CN Aluminate (Al(OH)<sub>63-</sub>), (OC-6-11)-, magnesium carbonate hydroxide (4:9:2:2), heptahydrate (9CI) (CA INDEX NAME)

CM 1

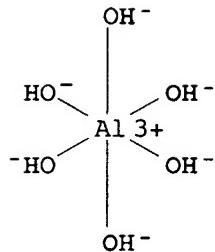
CRN 98036-77-2

CMF C O<sub>3</sub> . 2 Al H<sub>6</sub> O<sub>6</sub> . H O . 9/2 Mg

CM 2

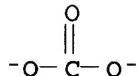
CRN 18893-33-9

CMF Al H6 O6  
 CCI CCS



CM 3

CRN 3812-32-6  
 CMF C O3



REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 3 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2006:120215 HCAPLUS

DOCUMENT NUMBER: 144:214278

TITLE: Elastic fibers with improved knitting properties at high knitting speed and reduced surface friction, comprising polyurethane urea fibers and manufacture thereof

INVENTOR(S): Ohashi, Hideyuki; Arimoto, Hisao; Matsui, Yoshihiro

PATENT ASSIGNEE(S): Toyobo Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006037277	A2	20060209	JP 2004-218471	20040727
			JP 2004-218471	20040727

PRIORITY APPLN. INFO.:

AB The elastic fibers (A1) comprise fibers showing feeding yarn tension  $\leq 0.2$  cN/dtex at draft ratio 3.5 and knitting speed 50 m/min, or the elastic fibers comprise above A1 fibers consisting of polyurethane urea polymers containing 5-50 mol% hydroxy groups at the mol. chain end and/or 30-70 mol%  $C\geq 4$ -alkyl groups at the mol. chain end, or the elastic fibers comprise above A1 fibers containing 0.3-5% hydrotalcite compds. The elastic fiber are prepared by the steps comprising the steps (a) stirring and treating organic diisocyanates with poly(tetramethylene ether) glycol (I) and monohydric alcs. having  $C\geq 4$ -alkyl groups to form capped glycals having capping ratio 1.55-1.68 and isocyanate content 1.9-2.35%, and

treating the capped glycols with chain extenders containing 85-95% ethylenediamine (II) in an organic solvent and terminating the polymer mol. chain ends with monoalcoholamines to give polyurethane urea polymers, and (b) dry spinning the polymers, or the elastic fibers are prepared by the above steps by winding the spun yarns at ≤900 m/min. The elastic fibers are useful for swimsuits, inner and outer wears, diaper covers, and sanitary products. Thus, 397.5 parts methylenebis(4-Ph isocyanate) were treated with 1950 parts I and 4.7 part BuOH to give an isocyanate-terminated prepolymer with capping ratio 1.59 and isocyanate content 1.99%. The prepolymer was treated with 28.7 parts II and 3.9 parts propylenediamine in N,N-dimethylacetamide to give a chain-extended polymer, which was treated with 3.3 parts monoethanolamine to give a polyurethane (III) having terminal Bu group content 45% and terminal OH group content 30%. A liquid containing III and 0.5% (on III) hydrotalcite was dry spun at air temperature 235° and 470 m/min to give 22-dtex/2-filament fibers showing feeding yarn tension 0.10 cN/dtex at draft ratio 3.5 and knitting speed 50 m/min, and showing friction-induced tension variation at 100 m/min, 30%, and showing good knitting properties at high spinning speed, and exhibiting good stretch properties and good stretch recovery.

- CC 40-2 (Textiles and Fibers)  
Section cross-reference(s): 63
- ST polyurethane urea elastic fiber knitting property enhancement; friction redn polyurethane urea elastic fiber knitting property enhancement; swimsuit polyurethane urea elastic fiber knitting property enhancement; diaper cover polyurethane urea elastic fiber knitting property enhancement; sanitary product polyurethane urea elastic fiber knitting property enhancement; clothing polyurethane urea elastic fiber knitting property enhancement
- IT Diapers  
(covers; elastic fibers with improved knitting properties at high knitting speed and reduced surface friction, comprising polyurethane urea fibers and manufacture thereof for)
- IT Spandex fibers  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(diphenylmethane diisocyanate-ethylenediamine-propylenediamine-polytetramethylene glycol, block; elastic fibers with improved knitting properties at high knitting speed and reduced surface friction, comprising polyurethane urea fibers and manufacture thereof)
- IT Clothing  
(inner wears; elastic fibers with improved knitting properties at high knitting speed and reduced surface friction, comprising polyurethane urea fibers and manufacture thereof for)
- IT Polyurethane fibers  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(polyurea-; elastic fibers with improved knitting properties at high knitting speed and reduced surface friction, comprising polyurethane urea fibers and manufacture thereof)
- IT Synthetic polymeric fibers, uses  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(polyurea-polyurethanes; elastic fibers with improved knitting properties at high knitting speed and reduced surface friction, comprising polyurethane urea fibers and manufacture thereof)

IT Polyureas  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(polyurethane-, fiber; elastic fibers with improved knitting properties at high knitting speed and reduced surface friction, comprising polyurethane urea fibers and manufacture thereof)

IT Friction  
(reduction of; elastic fibers with improved knitting properties at high knitting speed and reduced surface friction, comprising polyurethane urea fibers and manufacture thereof)

IT Medical goods  
(sanitary products; elastic fibers with improved knitting properties at high knitting speed and reduced surface friction, comprising polyurethane urea fibers and manufacture thereof for)

IT Clothing  
(swimwear; elastic fibers with improved knitting properties at high knitting speed and reduced surface friction, comprising polyurethane urea fibers and manufacture thereof for)

IT 79-10-7D, Acrylic acid, esters, polymers  
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)  
(crosslinked, friction reducer; elastic fibers with improved knitting properties at high knitting speed and reduced surface friction, comprising polyurethane urea fibers and manufacture thereof)

IT 159018-07-2DP, Ethylenediamine-methylenebis(4-phenyl isocyanate)-poly(tetramethylene ether) glycol-propylenediamine block copolymer, reaction products with butanol  
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(fiber; elastic fibers with improved knitting properties at high knitting speed and reduced surface friction, comprising polyurethane urea fibers and manufacture thereof)

IT 12304-65-3, Hydrotalcite  
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)  
(friction reducer; elastic fibers with improved knitting properties at high knitting speed and reduced surface friction, comprising polyurethane urea fibers and manufacture thereof)

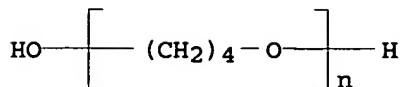
IT 159018-07-2DP, Ethylenediamine-methylenebis(4-phenyl isocyanate)-poly(tetramethylene ether) glycol-propylenediamine block copolymer, reaction products with butanol  
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(fiber; elastic fibers with improved knitting properties at high knitting speed and reduced surface friction, comprising polyurethane urea fibers and manufacture thereof)

RN 159018-07-2 HCPLUS

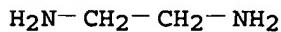
CN 1,2-Propanediamine, polymer with 1,2-ethanediamine,  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene], block (9CI) (CA INDEX NAME)

CM 1

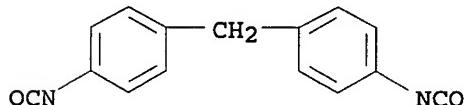
CRN 25190-06-1  
CMF (C<sub>4</sub> H<sub>8</sub> O)<sub>n</sub> H<sub>2</sub> O  
CCI PMS



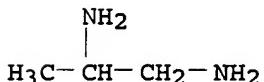
CM 2

CRN 107-15-3  
CMF C2 H8 N2

CM 3

CRN 101-68-8  
CMF C15 H10 N2 O2

CM 4

CRN 78-90-0  
CMF C3 H10 N2

IT 12304-65-3, Hydrotalcite

RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)  
(friction reducer; elastic fibers with improved knitting properties at  
high knitting speed and reduced surface friction, comprising  
polyurethane urea fibers and manufacture thereof)

RN 12304-65-3 HCAPLUS

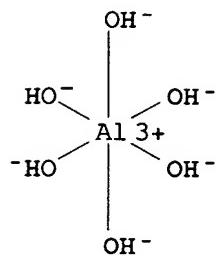
CN Hydrotalcite ( $\text{Mg}_6(\text{CO}_3)[\text{Al}(\text{OH})_6]_2(\text{OH})_4 \cdot 4\text{H}_2\text{O}$ ) (9CI) (CA INDEX NAME)

CM 1

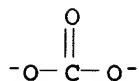
CRN 11097-59-9  
CMF C O3 . 2 Al H6 O6 . 4 H O . 6 Mg

CM 2

CRN 18893-33-9  
CMF Al H6 O6  
CCI CCS



CM 3

CRN 3812-32-6  
CMF C O3

L21 ANSWER 4 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2006:15003 HCPLUS  
 DOCUMENT NUMBER: 144:109086  
 TITLE: Clay-containing polymer composition and its preparation and applications  
 INVENTOR(S): Schomaker, Elwin; De Vos, Siebe Cornelis  
 PATENT ASSIGNEE(S): Akzo Nobel N.V., Neth.  
 SOURCE: PCT Int. Appl., 31 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006000550	A1	20060105	WO 2005-EP52869	20050621
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
PRIORITY APPLN. INFO.:			EP 2004-76822 US 2004-588789P	A 20040623 P 20040719

AB A clay-containing polymer composition is prepared by mixing an inorg. anionic clay,

such as hydrotalcite or meixnerite, and a cyclic monomer selected from cyclic esters, carbonates, anhydrides, lactams, monoepoxides, bisepoxides,

and siloxane, and polymerizing at 50-250° in the absence of initiator or catalyst. The above polymer composition can be dispersed in a polymer matrix selected from polyolefins, polyesters, vinyl polymers, acrylic resins, epoxy resins, polycarbonates, polyamides, polyaramids, polyimides, polyamino acids, polysaccharides, polyurethanes, and polysulfones, and the composition can be used in coating, ink, cleaning, cement, plaster, or paper. Thus, hydrotalcite (DHT 4A) was mixed with ε-caprolactone and then polymerized at 160°.

- IC ICM C08K003-34  
ICS C08G063-08; C08F002-44  
CC 37-3 (Plastics Manufacture and Processing)  
Section cross-reference(s): 38, 39, 40, 42, 46, 63  
ST caprolactone homopolymer polyester hydrotalcite compn prepn  
IT Polyamide fibers, uses  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(aramid; preparation of clay-containing polymer composition for coatings, inks,  
cement, paper, and medical applications)  
IT Medical goods  
(bandages; preparation of clay-containing polymer composition for coatings, inks,  
cement, paper, and medical applications)  
IT Detergents  
(cleaning compns.; preparation of clay-containing polymer composition for coatings,  
inks, cement, paper, and medical applications)  
IT Drug delivery systems  
(controlled-release; preparation of clay-containing polymer composition for coatings,  
inks, cement, paper, and medical applications)  
IT Medical goods  
(dressings; preparation of clay-containing polymer composition for coatings, inks,  
cement, paper, and medical applications)  
IT Medical goods  
(instruments; preparation of clay-containing polymer composition for coatings, inks,  
cement, paper, and medical applications)  
IT Medical goods  
(plasters; preparation of clay-containing polymer composition for coatings, inks,  
cement, paper, and medical applications)  
IT Polyamides, uses  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(poly(amino acids); preparation of clay-containing polymer composition for coatings,  
inks, cement, paper, and medical applications)  
IT Polyethers, uses  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(polyester-; preparation of clay-containing polymer composition for coatings, inks,  
cement, paper, and medical applications)  
IT Polyesters, uses  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(polyether-; preparation of clay-containing polymer composition for coatings, inks,

cement, paper, and medical applications)

IT Vinyl compounds, uses  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(polymers; preparation of clay-containing polymer composition for coatings, inks,  
inks,  
cement, paper, and medical applications)

IT Adhesives  
Cellulose pulp  
Cement  
Ceramics  
Coating materials  
Inks  
Nonwoven fabrics  
Pesticides  
Sorbents  
(preparation of clay-containing polymer composition for coatings, inks,  
cement,  
paper, and medical applications)

IT Clays, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(preparation of clay-containing polymer composition for coatings, inks,  
cement,  
paper, and medical applications)

IT Acrylic polymers, uses  
Epoxy resins, uses  
Polyamides, uses  
Polycarbonates, uses  
Polyesters, uses  
Polyimides, uses  
Polyolefins  
Polysaccharides, uses  
Polysulfones, uses  
Polyurethanes, uses  
Rubber, uses  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(preparation of clay-containing polymer composition for coatings, inks,  
cement,  
paper, and medical applications)

IT Fertilizers  
RL: TEM (Technical or engineered material use); USES (Uses)  
(preparation of clay-containing polymer composition for coatings, inks,  
cement,  
paper, and medical applications)

IT 146059-27-0, Adipic acid-ethoxylated bisphenol A-terephthalic acid copolymer  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(Setafix P 130; preparation of clay-containing polymer composition for  
coatings,  
inks, cement, paper, and medical applications)

IT 24980-41-4P, Polyε-caprolactone 25248-42-4P,  
Poly[oxy(1-oxo-1,6-hexanediyl)]  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(preparation of clay-containing polymer composition for coatings, inks,  
cement,  
paper, and medical applications)

IT 11097-59-9, DHT 4A 12304-65-3, Hydrotalcite

56321-81-4, Meixnerite

RL: MOA (Modifier or additive use); USES (Uses)

(preparation of clay-containing polymer composition for coatings, inks, cement,

paper, and medical applications)

IT 11097-59-9, DHT 4A 12304-65-3, Hydrotalcite

RL: MOA (Modifier or additive use); USES (Uses)

(preparation of clay-containing polymer composition for coatings, inks, cement,

paper, and medical applications)

RN 11097-59-9 HCAPLUS

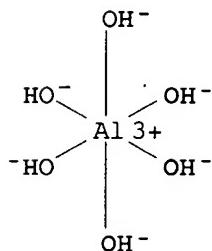
CN Aluminate ( $\text{Al(OH)}_6^-$ ), ( $\text{OC-6-11}$ ) $^-$ , magnesium carbonate hydroxide (2:6:1:4)  
(9CI) (CA INDEX NAME)

CM 1

CRN 18893-33-9

CMF Al H6 O6

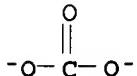
CCI CCS



CM 2

CRN 3812-32-6

CMF C O3



RN 12304-65-3 HCAPLUS

CN Hydrotalcite ( $\text{Mg}_6(\text{CO}_3)[\text{Al}(\text{OH})_6]_2(\text{OH})_4 \cdot 4\text{H}_2\text{O}$ ) (9CI) (CA INDEX NAME)

CM 1

CRN 11097-59-9

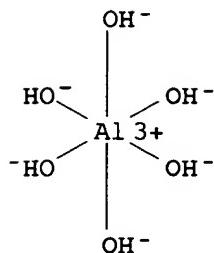
CMF C O3 . 2 Al H6 O6 . 4 H O . 6 Mg

CM 2

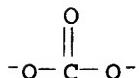
CRN 18893-33-9

CMF Al H6 O6

CCI CCS



CM 3

CRN 3812-32-6  
CMF C 03

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 5 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2005:1331703 HCAPLUS  
 DOCUMENT NUMBER: 144:53005  
 TITLE: Chlorine-resistant Elastane fibers resistant to color change  
 INVENTOR(S): Huette, Stephan; Behrens, Hans-Josef; Naroska, Darius  
 PATENT ASSIGNEE(S): Dorlastan Fibers GmbH, Germany  
 SOURCE: Eur. Pat. Appl., 13 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1607499	A1	20051221	EP 2005-12586	20050611
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU				
DE 102004029274	A1	20060105	DE 2004-102004029274	20040617
US 2005288417	A1	20051229	US 2005-151380	20050613
SG 118374	A1	20060127	SG 2005-3747	20050614
JP 2006002336	A2	20060105	JP 2005-176964	20050616
CN 1782148	A	20060607	CN 2005-10092250	20050617

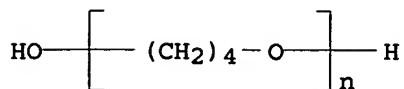
## PRIORITY APPLN. INFO.:

AB The title fibers (polyurea-polyurethane fibers) contain hydrotalcites of specified composition and coated with 1-15% (based on hydrotalcite) dialkyl sulfosuccinate. Hydrotalcite coated with 5% bis(2-ethylhexyl) Na sulfosuccinate was added (10 phr) to a 20% AcNMe<sub>2</sub> solution of ethylenediamine-MDI-polytetramethylene glycol copolymer and spun at 195° and 5 m/min to give fibers with no color change; vs. a marked change when the hydrotalcite was coated with 5% stearic acid.

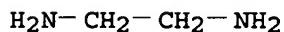
IC ICM D01F006-70  
ICS D01F001-10  
CC 40-2 (Textiles and Fibers)  
ST discoloration resistant polyurea polyurethane fiber; coating  
hydrotalcite filler polyurea polyurethane fiber; sulfosuccinate  
coating hydrotalcite filler fiber; ethylhexyl sulfosuccinate coating  
hydrotalcite filler fiber  
IT Spandex fibers  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or  
engineered material use); USES (Uses)  
(chlorine-resistant Elastane fibers resistant to color change)  
IT Fillers  
(hydrotalcite; fillers for chlorine-resistant Elastane fibers resistant  
to color change)  
IT Polyurethane fibers  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or  
engineered material use); USES (Uses)  
(polyurea-; chlorine-resistant Elastane fibers resistant to color  
change)  
IT Synthetic polymeric fibers, uses  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or  
engineered material use); USES (Uses)  
(polyurea-polyurethanes; chlorine-resistant Elastane fibers  
resistant to color change)  
IT Polyureas  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or  
engineered material use); USES (Uses)  
(polyurethane-, fiber; chlorine-resistant Elastane fibers  
resistant to color change)  
IT 577-11-7, Bis(2-ethylhexyl) sodium sulfosuccinate 922-80-5, Diamyl  
sodium sulfosuccinate 3006-15-3, Dihexyl sodium sulfosuccinate  
7491-09-0, Bis(2-ethylhexyl) potassium sulfosuccinate 23386-52-9  
30673-56-4, Ammonium bis(2-ethylhexyl) sulfosuccinate  
RL: TEM (Technical or engineered material use); USES (Uses)  
(coatings for fillers for chlorine-resistant Elastane fibers)  
IT 9053-66-1, Ethylenediamine-MDI-polytetramethylene glycol copolymer  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or  
engineered material use); USES (Uses)  
(fibers; chlorine-resistant Elastane fibers resistant to color change)  
IT 12304-65-3, Hydrotalcite  
RL: TEM (Technical or engineered material use); USES (Uses)  
(fillers for chlorine-resistant Elastane fibers resistant to color  
change)  
IT 9053-66-1, Ethylenediamine-MDI-polytetramethylene glycol copolymer  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or  
engineered material use); USES (Uses)  
(fibers; chlorine-resistant Elastane fibers resistant to color change)  
RN 9053-66-1 HCPLUS  
CN 1,2-Ethanediamine, polymer with  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-  
butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX  
NAME)

CM 1

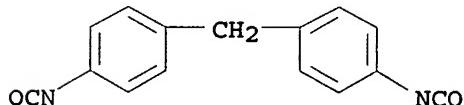
CRN 25190-06-1  
CMF (C<sub>4</sub> H<sub>8</sub> O)<sub>n</sub> H<sub>2</sub> O  
CCI PMS



CM 2

CRN 107-15-3  
CMF C2 H8 N2

CM 3

CRN 101-68-8  
CMF C15 H10 N2 O2

IT 12304-65-3, Hydrotalcite

RL: TEM (Technical or engineered material use); USES (Uses)  
(fillers for chlorine-resistant Elastane fibers resistant to color change)

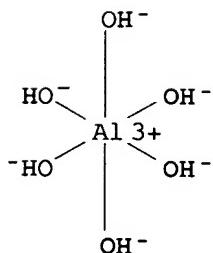
RN 12304-65-3 HCAPLUS

CN Hydrotalcite ( $\text{Mg}_6(\text{CO}_3)[\text{Al}(\text{OH})_6]_2(\text{OH})_4 \cdot 4\text{H}_2\text{O}$ ) (9CI) (CA INDEX NAME)

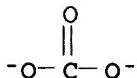
CM 1

CRN 11097-59-9  
CMF C O3 . 2 Al H6 O6 . 4 H O . 6 Mg

CM 2

CRN 18893-33-9  
CMF Al H6 O6  
CCI CCS

CM 3

CRN 3812-32-6  
CMF C O3

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 6 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2005:1328775 HCAPLUS  
 DOCUMENT NUMBER: 144:52999  
 TITLE: Chlorine-resistant fibers protected against color change  
 INVENTOR(S): Naroska, Darius; Huette, Stephan; Behrens, Hans-Josef  
 PATENT ASSIGNEE(S): Dorlastan Fibers G.M.B.H., Germany  
 SOURCE: Can. Pat. Appl., 22 pp.  
 CODEN: CPXXEB  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CA 2510039	AA	20051217	CA 2005-2510039	20050615
PRIORITY APPLN. INFO.:			CA 2005-2510039	20050615

AB The invention relates to elastic fibers of polyurethane-urea, which are not discolored by operating steps required to produce loop-forming knitted fabrics or textiles, e.g., heat setting or molding, and can be used in aqueous chlorinated environments, such as swimming pools, for swimwear, and to a process for their production. The polyurethane-urea fibers contain hydrotalcites coated with dialkyl sulfosuccinates.

IC ICM D01F006-70  
 ICS D01D005-00

CC 40-2 (Textiles and Fibers)

ST chlorine resistant fabric polyurethane urea elastic fiber; swimwear fiber fabric heat setting molding discoloration resistance; hydrotalcite coating dialkyl sulfosuccinate fiber fabric chlorine resistant

IT Chemically resistant materials  
 Discoloration prevention  
 Heat-resistant materials  
 (coated hydrotalcites for use in chlorine-resistant fibers with good resistance to color change)

IT Spandex fibers  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (diphenylmethane diisocyanate-ethylenediamine-polytetramethylene glycol, block; coated hydrotalcites for use in chlorine-resistant fibers with good resistance to color change)

IT Textiles  
 (knitted; coated hydrotalcites for use in chlorine-resistant fibers with good resistance to color change)

IT Clothing

(swimwear; coated hydrotalcites for use in chlorine-resistant fibers with good resistance to color change)

IT 207921-96-8, Hydrotalcite pentahydrate ( $Mg_6Al_2(OH)_{16}CO_3 \times 5H_2O$ )  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (coated hydrotalcites for use in chlorine-resistant fibers with good resistance to color change)

IT 127-39-9, Sodium diisobutyl sulfosuccinate 577-11-7, Aerosol OT 100  
 922-80-5, Sodium diamyl sulfosuccinate 1639-66-3, Sodium di-n-octyl sulfosuccinate 3006-15-3, Sodium dihexyl sulfosuccinate 23386-52-9, Sodium dicyclohexyl sulfosuccinate  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (coating; coated hydrotalcites for use in chlorine-resistant fibers with good resistance to color change)

IT 9053-66-1P, Ethylenediamine;MDI;PTMG copolymer 871506-41-1P,  
 Ethylenediamine-MDI-THF copolymer  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (fibers; coated hydrotalcites for use in chlorine-resistant fibers with good resistance to color change)

IT 207921-96-8, Hydrotalcite pentahydrate ( $Mg_6Al_2(OH)_{16}CO_3 \times 5H_2O$ )  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (coated hydrotalcites for use in chlorine-resistant fibers with good resistance to color change)

RN 207921-96-8 HCPLUS

CN Aluminate ( $Al(OH)_{63-}$ ), (OC-6-11)-, magnesium carbonate hydroxide (2:6:1:4), pentahydrate (9CI) (CA INDEX NAME)

CM 1

CRN 11097-59-9

CMF C O3 . 2 Al H6 O6 . 4 H O . 6 Mg

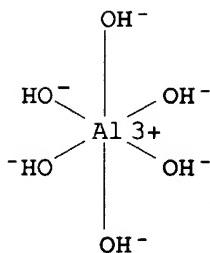
X

CM 2

CRN 18893-33-9

CMF Al H6 O6

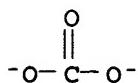
CCI CCS



CM 3

CRN 3812-32-6

CMF C O3



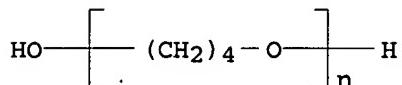
IT 9053-66-1P, Ethylenediamine;MDI;PTMG copolymer  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
 engineered material use); PREP (Preparation); USES (Uses)  
 (fibers; coated hydrotalcites for use in chlorine-resistant fibers with  
 good resistance to color change)

RN 9053-66-1 HCAPLUS

CN 1,2-Ethanediamine, polymer with  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-  
 butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX  
 NAME)

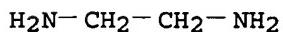
CM 1

CRN 25190-06-1  
 CMF (C4 H8 O)n H2 O  
 CCI PMS



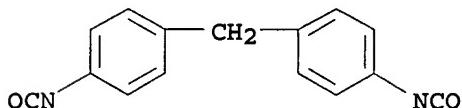
CM 2

CRN 107-15-3  
 CMF C2 H8 N2



CM 3

CRN 101-68-8  
 CMF C15 H10 N2 O2



L21 ANSWER 7 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:1210178 HCAPLUS

DOCUMENT NUMBER: 143:461635

TITLE: Layered nanometer composite-reinforced urethane  
 elastic fiber and its preparation method

INVENTOR(S): Sun, Xianyu; Liu, Zhi; Liu, Xinhai; Lin, Yang; Kong,  
 Kejian; Xu, Duanfu; Wu, Jinguang

PATENT ASSIGNEE(S): College of Chemistry and Molecular Engineering, Peking

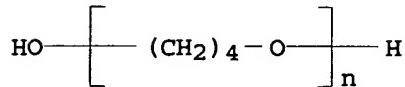
SOURCE: University, Peop. Rep. China  
 Faming Zhanli Shenqing Gongkai Shuomingshu, 13 pp.  
 CODEN: CNXXEV

DOCUMENT TYPE: Patent  
 LANGUAGE: Chinese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1584149	A	20050223	CN 2003-153706	20030818
			CN 2003-153706	20030818
<b>PRIORITY APPLN. INFO.:</b>				
AB The method comprises reacting polytetramethylene glycol (PTMG) with 4,4'-MDI, dissolving in DMF or di-Me acetamide (DMAC) to form a solution of prepolymer (component A); using DMF or DMAC as solvent to form a chain extender solution of 1,2-propylenediamine, and N-methyldiethanolamine or diethanolamine (component B); adding a layered nanometer material such as organized montmorillonite or organized hydrotalcite into component B to form an intercalated composite (B'); and adding component A into B' at a molar ratio of A/B'<1 to form a macromol. spinning dope for urethane elastic fiber. The breaking elongation of the nanometer composite reinforced urethane elastic fiber prepared from the above spinning dope is increased by 50% to reach 1000%, and the tensile strength at break is increased by more than 30% to reach 1.1 g/denier.				
IC	ICM D01F006-48			
	ICS C08J005-04			
CC	40-2 (Textiles and Fibers)			
ST	layered nanometer composite reinforced urethane elastic fiber; organized montmorillonite reinforced urethane elastic fiber; polytetramethylene glycol MDI chain extender urethane fiber			
IT	Spandex fibers RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (layered nanometer composite-reinforced urethane elastic fiber and its preparation method)			
IT	477339-03-0P, Polytetramethylene glycol-4,4'-MDI-1,2-Propylenediamine copolymer 869116-52-9P 869116-53-0P RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses) (layered nanometer composite-reinforced urethane elastic fiber and its preparation method)			
IT	1318-93-0D, Montmorillonite, organized 12304-65-3D, Hydrotalcite, organized RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses) (layered nanometer composite-reinforced urethane elastic fiber and its preparation method)			
IT	477339-03-0P, Polytetramethylene glycol-4,4'-MDI-1,2-Propylenediamine copolymer 869116-52-9P 869116-53-0P RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses) (layered nanometer composite-reinforced urethane elastic fiber and its preparation method)			
RN	477339-03-0 HCPLUS			
CN	1,2-Propanediamine, polymer with $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX NAME)			

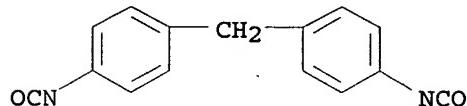
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CRN 25190-06-1  
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 CCI PMS



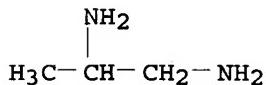
CM 2

CRN 101-68-8  
 CMF C<sub>15</sub> H<sub>10</sub> N<sub>2</sub> O<sub>2</sub>



CM 3

CRN 78-90-0  
 CMF C<sub>3</sub> H<sub>10</sub> N<sub>2</sub>

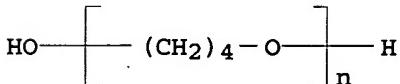


RN 869116-52-9 HCPLUS

CN Ethanol, 2,2'-(methylenimino)bis-, polymer with  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl), 1,1'-methylenebis[4-isocyanatobenzene] and 1,2-propanediamine (9CI) (CA INDEX NAME)

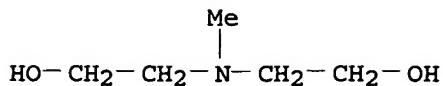
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CRN 25190-06-1  
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 CCI PMS

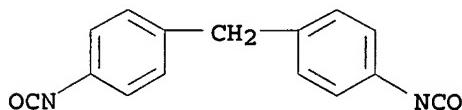


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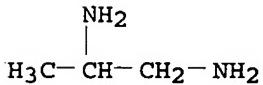
CRN 105-59-9  
 CMF C<sub>5</sub> H<sub>13</sub> N O<sub>2</sub>



CM 3

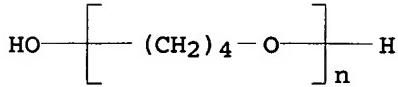
CRN 101-68-8  
CMF C15 H10 N2 O2

CM 4

CRN 78-90-0  
CMF C3 H10 N2

RN 869116-53-0 HCPLUS  
 CN Ethanol, 2,2'-iminobis-, polymer with  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl), 1,1'-methylenebis[4-isocyanatobenzene], 2,2'-(methylenimino)bis[ethanol] and 1,2-propanediamine (9CI) (CA INDEX NAME)

CM 1

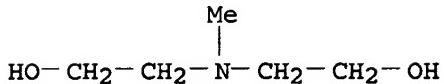
CRN 25190-06-1  
CMF (C4 H8 O)n H2 O  
CCI PMS

CM 2

CRN 111-42-2  
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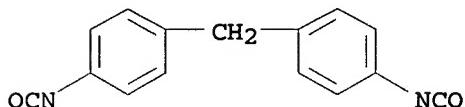
CM 3

CRN 105-59-9  
 CMF C5 H13 N O2



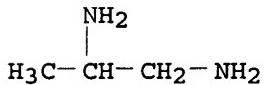
CM 4

CRN 101-68-8  
 CMF C15 H10 N2 O2



CM 5

CRN 78-90-0  
 CMF C3 H10 N2



IT 12304-65-3D, Hydrotalcite, organized  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (layered nanometer composite-reinforced urethane elastic fiber and its preparation method)

RN 12304-65-3 HCAPLUS

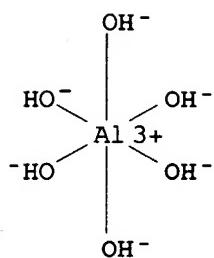
CN Hydrotalcite (Mg<sub>6</sub>(CO<sub>3</sub>)<sub>2</sub>[Al(OH)<sub>6</sub>]<sub>2</sub>(OH)<sub>4</sub>.4H<sub>2</sub>O) (9CI) (CA INDEX NAME)

CM 1

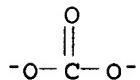
CRN 11097-59-9  
 CMF C O3 . 2 Al H6 O6 . 4 H O . 6 Mg

CM 2

CRN 18893-33-9  
 CMF Al H6 O6  
 CCI CCS



CM 3

CRN 3812-32-6  
CMF C O3

L21 ANSWER 8 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2005:609109 HCAPLUS  
 DOCUMENT NUMBER: 143:116747  
 TITLE: Polyurethane elastic fibers with improved chlorine resistance, consisting of polyurethane-urea polymers and polyurethanes, and containing inorganic compound chlorine degradation prevention agents, and manufacture thereof and fabrics and swimsuits therefrom  
 INVENTOR(S): Uemura, Hiroshi; Shibata, Takatoshi; Umesawa, Masao  
 PATENT ASSIGNEE(S): Opelontex Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 26 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005187995	A2	20050714	JP 2003-432503	20031226
PRIORITY APPLN. INFO.:			JP 2003-432503	20031226
<b>AB</b> The elastic fibers (A1) comprise fibers prepared from polyurethane-urea polymers and polyurethanes, and contain hindered phenol compds. (A) containing $\geq 1$ hindered hydroxy Ph group and having mol. weight $\geq 300$ , and contain inorg. salt-type chlorine degradation prevention agents (B), or the elastic fibers comprise above A1 fibers containing 0.15-3% A compds. and 0.1-10% B agents. The elastic fibers are prepared by solution spinning solns. containing polyurethane-urea polymers and polyurethanes as the solute, and containing A phenol compds. and B inorg. agents. The fabrics (A2) contain above A1 elastic fibers. The swimsuits comprise swimwear prepared from above A2 fabrics. Polytetramethylene glycol (I) with mol. weight (Mw) 1800 was treated with MDI to give a reaction product, which was treated with ethylenediamine to give				

a polyurethane polyurea (II). I with Mw 2900 was treated with MDI to give a reaction product, which was treated with ethylene glycol to give a polyurethane (III). A liquid containing 1800 g of 35% (solids) II solution, 970 g of 35% (solids) III solution and containing 2% (on fiber) ethylene 1,2-bis[3,3-bis(3-tert-butyl-4-hydroxyphenyl)butyrate] (Hostanox O 3) and 3% ZnO with average particle diameter  $\leq 1 \mu\text{m}$  was dry spun at 540 m/min and wound to give 44-dtex/4-filament fibers showing tensile strength 48 cN, stress relaxation 30%, and elongation 456%, and exhibiting time required for degradation of the fibers 298 h, on immersing 5 g fibers in Cl water at 28°, and showing heat-setting amount 66% on heat-treating the yarns of the fibers in the stretched state for 1 min at 180°.

IC ICM D01F006-94

ICS A41D007-00; A41D031-00; D01F006-70

CC 40-1 (Textiles and Fibers)

ST polyurethane elastic fiber chlorine resistant heat setting property enhancement; polyurea polyurethane fiber chlorine resistant heat setting property enhancement; inorg compd chlorine degrdn preventer polyurethane fiber; zinc oxide chlorine degrdn preventer polyurethane fiber; swimsuit polyurethane elastic fiber chlorine resistant; fabric polyurethane elastic fiber chlorine resistant

IT Inorganic compounds

RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)  
(chlorine degradation prevention agents; polyurethane elastic fibers with chlorine resistance, consisting of polyurethane-urea polymers and polyurethanes, and containing inorg. compound chlorine degradation prevention agents)

IT Light stabilizers

(hindered phenol compds.; polyurethane elastic fibers with chlorine resistance, consisting of polyurethane-urea polymers and polyurethanes, and containing inorg. compound chlorine degradation prevention agents)

IT Phenols, uses

RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)  
(hindered, light stabilizers; polyurethane elastic fibers with chlorine resistance, consisting of polyurethane-urea polymers and polyurethanes, and containing inorg. compound chlorine degradation prevention agents)

IT Polyurethanes, uses

RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(polyurea-, polyurethane blends, fiber; polyurethane elastic fibers with chlorine resistance, consisting of polyurethane-urea polymers and polyurethanes, and containing inorg. compound chlorine degradation prevention agents)

IT Polyurethanes, uses

RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(polyurea-polyurethane blends, fiber; polyurethane elastic fibers with chlorine resistance, consisting of polyurethane-urea polymers and polyurethanes, and containing inorg. compound chlorine degradation prevention agents)

IT Textiles

(polyurethane elastic fibers with chlorine resistance, consisting of polyurethane-urea polymers and polyurethanes, and containing inorg. compound chlorine degradation prevention agents)

IT Spandex fibers

- RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (polyurethane elastic fibers with chlorine resistance,  
 consisting of polyurethane-urea polymers and  
 polyurethanes, and containing inorg. compound chlorine degradation  
 prevention agents)
- IT Polyureas  
 RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (polyurethane-, polyurethane blends, fiber;  
 polyurethane elastic fibers with chlorine resistance,  
 consisting of polyurethane-urea polymers and  
 polyurethanes, and containing inorg. compound chlorine degradation  
 prevention agents)
- IT Polymer blends  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (polyurethane-polyurea-polyurethane blends, fiber;  
 polyurethane elastic fibers with chlorine resistance,  
 consisting of polyurethane-urea polymers and  
 polyurethanes, and containing inorg. compound chlorine degradation  
 prevention agents)
- IT Clothing  
 (swimwear; polyurethane elastic fibers with chlorine  
 resistance, consisting of polyurethane-urea polymers and  
 polyurethanes, and containing inorg. compound chlorine degradation  
 prevention agents)
- IT 32509-66-3, Ethylene 1,2-bis[3,3-bis(3-tert-butyl-4-hydroxyphenyl)butyrate]  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (Hostanox O 3, light stabilizer; polyurethane elastic fibers  
 with chlorine resistance, consisting of polyurethane-urea  
 polymers and polyurethanes, and containing inorg. compound chlorine  
 degradation prevention agents)
- IT 1309-48-4, Magnesium oxide, uses 1314-13-2, Zinc oxide, uses 12072-90-1, Hydromagnesite 12304-65-3, Hydrotalcite [Mg<sub>6</sub>Al<sub>2</sub>(OH)<sub>16</sub>CO<sub>3</sub>.4H<sub>2</sub>O] 19569-21-2, Huntite  
 RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)  
 (chlorine degradation prevention agent; polyurethane elastic  
 fibers with chlorine resistance, consisting of polyurethane  
 -urea polymers and polyurethanes, and containing inorg. compound  
 chlorine degradation prevention agents)
- IT 85-60-9, 1,1-Bis(2-methyl-5-tert-butyl-4-hydroxyphenyl)butane  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (light stabilizer; polyurethane elastic fibers with chlorine  
 resistance, consisting of polyurethane-urea polymers and  
 polyurethanes, and containing inorg. compound chlorine degradation  
 prevention agents)
- IT 1843-03-4, Lowinox CA 22  
 RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)  
 (light stabilizer; polyurethane elastic fibers with chlorine  
 resistance, consisting of polyurethane-urea polymers and  
 polyurethanes, and containing inorg. compound chlorine degradation  
 prevention agents)
- IT 61245-23-6P, Ethylene glycol-MDI-polytetramethylene glycol block copolymer 107375-35-9P, Ethylenediamine-MDI-polytetramethylene glycol block copolymer

RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)

(polyurethane blends, fiber; polyurethane elastic fibers with chlorine resistance, consisting of polyurethane-urea polymers and polyurethanes, and containing inorg. compound chlorine degradation prevention agents)

IT 7782-50-5, Chlorine, miscellaneous

RL: MSC (Miscellaneous)

(resistance to; polyurethane elastic fibers with chlorine resistance, consisting of polyurethane-urea polymers and polyurethanes, and containing inorg. compound chlorine degradation prevention agents)

IT 12304-65-3, Hydrotalcite [Mg<sub>6</sub>Al<sub>2</sub>(OH)<sub>16</sub>CO<sub>3</sub>.4H<sub>2</sub>O]

RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses) (chlorine degradation prevention agent; polyurethane elastic fibers with chlorine resistance, consisting of polyurethane-urea polymers and polyurethanes, and containing inorg. compound chlorine degradation prevention agents)

RN 12304-65-3 HCAPLUS

CN Hydrotalcite (Mg<sub>6</sub>(CO<sub>3</sub>)<sub>2</sub>[Al(OH)<sub>6</sub>]<sub>2</sub>(OH)<sub>4</sub>.4H<sub>2</sub>O) (9CI) (CA INDEX NAME)

CM 1

CRN 11097-59-9

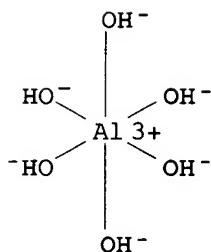
CMF C O<sub>3</sub> . 2 Al H<sub>6</sub> O<sub>6</sub> . 4 H O . 6 Mg

CM 2

CRN 18893-33-9

CMF Al H<sub>6</sub> O<sub>6</sub>

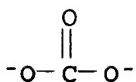
CCI CCS



CM 3

CRN 3812-32-6

CMF C O<sub>3</sub>



IT 61245-23-6P, Ethylene glycol-MDI-polytetramethylene glycol block copolymer 107375-35-9P, Ethylenediamine-MDI-polytetramethylene

## glycol block copolymer

RL: IMF (Industrial manufature); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)

(polyurethane blends, fiber; polyurethane elastic fibers with chlorine resistance, consisting of polyurethane -urea polymers and polyurethanes, and containing inorg. compound chlorine degradation prevention agents)

RN 61245-23-6 HCAPLUS

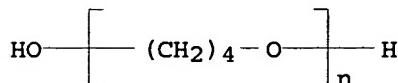
CN 1,2-Ethanediol, polymer with  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene], block (9CI) (CA INDEX NAME)

CM 1

CRN 25190-06-1

CMF (C<sub>4</sub> H<sub>8</sub> O)<sub>n</sub> H<sub>2</sub> O

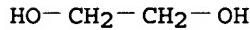
CCI PMS



CM 2

CRN 107-21-1

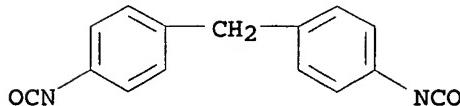
CMF C<sub>2</sub> H<sub>6</sub> O<sub>2</sub>



CM 3

CRN 101-68-8

CMF C<sub>15</sub> H<sub>10</sub> N<sub>2</sub> O<sub>2</sub>



RN 107375-35-9 HCAPLUS

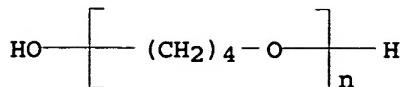
CN 1,2-Ethanediamine, polymer with  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene], block (9CI) (CA INDEX NAME)

CM 1

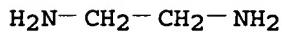
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CMF (C<sub>4</sub> H<sub>8</sub> O)<sub>n</sub> H<sub>2</sub> O

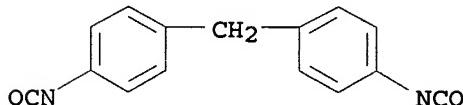
CCI PMS



CM 2

CRN 107-15-3  
CMF C2 H8 N2

CM 3

CRN 101-68-8  
CMF C15 H10 N2 O2

L21 ANSWER 9 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2004:956097 HCPLUS  
 DOCUMENT NUMBER: 142:262969  
 TITLE: Polyurethane elastic yarn having chlorine resistance and manufacturing method thereof  
 INVENTOR(S): Song, Byeong Su; Seo, Seung Won; Lee, Tae U.; Lee, Dae Hui  
 PATENT ASSIGNEE(S): Doobon Inc., S. Korea; Hyosung Corporation  
 SOURCE: Repub. Korean Kongkae Taeho Kongbo, No pp. given  
 CODEN: KRXXA7  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Korean  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
KR 2003079404	A	20031010	KR 2002-18408	20020404
PRIORITY APPLN. INFO.:			KR 2002-18408	20020404

AB A manufacturing method of polyurethane elastic yarn having excellent chlorine resistance is characterized by using hydrotalcite coated with  $\beta$ -diketone. The polyurethane elastic yarn is useful for underwear, socks, sports wear and a swimming suit. The polyurethane elastic yarn is obtained by the steps of: coating the hydrotalcite with  $\beta$ -diketone (a formula 7); and then adding the hydrotalcite to a spinning stock solution containing polyurethane polymer. In the formula 7, R1 and R2 are independently C1-C30 aliphatic hydrocarbon group, C1-C30 aromatic hydrocarbon group or C1-C30 ring hydrocarbon group; and at least one of R1 and R2 is C1-C30 aliphatic hydrocarbon group surely.

IC ICM D01F006-70  
 CC 40-5 (Textiles and Fibers)  
 ST chlorine resistant polyurethane elastic yarn coating  
 IT Coating materials  
     (chemical resistant; coating of polyurethane elastic yarn with  
     hydratalcite for chlorine resistance)  
 IT Spandex fibers  
   RL: MSC (Miscellaneous)  
     (coating of polyurethane elastic yarn with hydratalcite for  
     chlorine resistance)  
 IT Hydrocarbons, uses  
   RL: NUU (Other use, unclassified); USES (Uses)  
     (coating of polyurethane elastic yarn with hydratalcite for  
     chlorine resistance)  
 IT 12304-65-3, Hydratalcite  
   RL: PEP (Physical, engineering or chemical process); PYP (Physical  
   process); TEM (Technical or engineered material use); PROC (Process); USES  
   (Uses)  
     (coating of polyurethane elastic yarn with hydratalcite for  
     chlorine resistance)  
 IT 12304-65-3, Hydratalcite  
   RL: PEP (Physical, engineering or chemical process); PYP (Physical  
   process); TEM (Technical or engineered material use); PROC (Process); USES  
   (Uses)  
     (coating of polyurethane elastic yarn with hydratalcite for  
     chlorine resistance)  
 RN 12304-65-3 HCAPLUS  
 CN Hydratalcite ( $Mg_6(CO_3)[Al(OH)_6]_2(OH)_4 \cdot 4H_2O$ ) (9CI) (CA INDEX NAME)

CM 1

CRN 11097-59-9

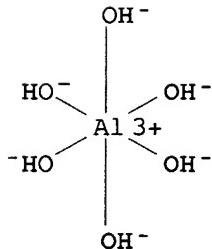
CMF C O3 . 2 Al H6 O6 . 4 H O . 6 Mg

CM 2

CRN 18893-33-9

CMF Al H6 O6

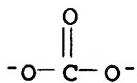
CCI CCS



CM 3

CRN 3812-32-6

CMF C O3



L21 ANSWER 10 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2004:903814 HCPLUS  
 DOCUMENT NUMBER: 141:355422  
 TITLE: Medical patches having stretching substrate and showing good massage effect  
 INVENTOR(S): Ishimaru, Takako; Kita, Noriyuki; Ishikawa, Satoshi  
 PATENT ASSIGNEE(S): Lion Corp., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004298474	A2	20041028	JP 2003-96683	20030331
PRIORITY APPLN. INFO.:			JP 2003-96683	20030331
AB Title patches comprise (1) a stretching substrate sheet having plural protrusions on either side of the sheet, and (2) a hydrogel layer containing polyacrylic acid (I) and/or its salt and crosslinking agent, coated on the protruded side. Thus, aqueous gel containing I, its Na salt, carboxyvinyl polymer, hydrotalcite, and essential oils was applied on a polyester nonwoven fabric having hemispherical polyurethane foam protrusions to give a patch, which had high efficacy in treatment of fatigue and back pain.				
IC	ICM A61F007-10			
IC	ICS A61F007-02; A61H039-04; A61J001-00; A61L015-58			
CC	63-6 (Pharmaceuticals)			
ST	Section cross-reference(s): 40			
ST	patch stretching substrate polyurethane foam protrusion massaging; polyacrylic acid hydrotalcite medical patch stretching substrate massaging			
IT	Vinyl compounds, biological studies			
IT	RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (carboxy-containing, polymers; medical patches containing poly(acrylic acid)-based aqueous gels and stretching protruded substrate for good massage effect)			
IT	Polyester fibers, biological studies			
IT	RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (fabrics, nonwoven, substrates; medical patches containing poly(acrylic acid)-based aqueous gels and stretching protruded substrate for good massage effect)			
IT	Polyurethanes, biological studies			
IT	RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (foams, protrusions; medical patches containing poly(acrylic acid)-based aqueous gels and stretching protruded substrate for good massage effect)			
IT	Human			
IT	(medical patches containing poly(acrylic acid)-based aqueous gels and stretching protruded substrate for good massage effect)			
IT	Drug delivery systems			
IT	(patches; medical patches containing poly(acrylic acid)-based aqueous gels and			

stretching protruded substrate for good massage effect)

IT Nonwoven fabrics  
 (polyester fabrics, substrates; medical patches containing poly(acrylic acid)-based aqueous gels and stretching protruded substrate for good massage effect)

IT Plastic foams  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (polyurethanes, protrusions; medical patches containing poly(acrylic acid)-based aqueous gels and stretching protruded substrate for good massage effect)

IT Acrylic polymers, biological studies  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (protrusions; medical patches containing poly(acrylic acid)-based aqueous gels and stretching protruded substrate for good massage effect)

IT 9003-01-4D, Polyacrylic acid, crosslinked  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (Aqupec; medical patches containing poly(acrylic acid)-based aqueous gels and stretching protruded substrate for good massage effect)

and  
 stretching protruded substrate for good massage effect)

IT 12304-65-3, Hydrotalcite  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (crosslinking agent; medical patches containing poly(acrylic acid)-based aqueous gels and stretching protruded substrate for good massage effect)

IT 9003-01-4, Polyacrylic acid 9003-04-7, Aronvis S  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (medical patches containing poly(acrylic acid)-based aqueous gels and stretching protruded substrate for good massage effect)

IT 12304-65-3, Hydrotalcite  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (crosslinking agent; medical patches containing poly(acrylic acid)-based aqueous gels and stretching protruded substrate for good massage effect)

RN 12304-65-3 HCAPLUS

CN Hydrotalcite ( $Mg_6(CO_3)[Al(OH)_6]_2(OH)_4 \cdot 4H_2O$ ) (9CI) (CA INDEX NAME)

CM 1

CRN 11097-59-9

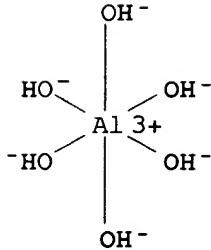
CMF C O3 . 2 Al H6 O6 . 4 H O . 6 Mg

CM 2

CRN 18893-33-9

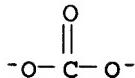
CMF Al H6 O6

CCI CCS



CM 3

CRN 3812-32-6  
 CMF C O3



L21 ANSWER 11 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:649303 HCAPLUS

DOCUMENT NUMBER: 141:175446

TITLE: Chlorine-resistant Elastan (polyurea-polyurethane) fibers

INVENTOR(S): Huette, Stephan; Behrens, Hans-Josef; Baldus, Hans-Peter; Drews, Holger

PATENT ASSIGNEE(S): Bayer Faser GmbH, Germany

SOURCE: Ger. Offen., 11 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

*applicants*

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10302912	A1	20040812	DE 2003-10302912	20030124
EP 1452631	A1	20040901	EP 2004-698	20040115
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
KR 2004068490	A	20040731	KR 2004-4277	20040120
US 2005038138	A1	20050217	<u>US 2004-760512</u>	20040120
CA 2455713	AA	20040724	CA 2004-2455713	20040121
CN 1523140	A	20040825	CN 2004-10007322	20040121
JP 2004232185	A2	20040819	JP 2004-14269	20040122

PRIORITY APPLN. INFO.: DE 2003-10302912 A 20030124

AB The title fibers, resistant to chlorinated water, contain 0.05-10% fine hydrotalcite of specified composition. A polyester-polyether-polyurea-polyurethane fiber containing 3% hydrotalcite [Mg<sub>6</sub>Al<sub>2</sub>(OH)<sub>12</sub>CO<sub>3</sub>.5H<sub>2</sub>O] coated with 2% stearic acid after exposure to H<sub>2</sub>O containing 20 mg Cl/L for 10 h had tenacity 38 cN and elongation 504%; vs. 0 and 0, resp., without stabilizer.

IC ICM D01F006-70

ICS D01F001-10; A41D031-00

CC 40-10 (Textiles and Fibers)

ST polyurea polyurethane fiber chlorine stabilizer; hydrotalcite chlorine stabilizer Elastan fiber

IT Spandex fibers

RL: POF (Polymer in formulation); USES (Uses)  
 (chlorine-resistant Elastan (polyurea-polyurethane) fibers)

IT Polyurethanes, uses

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(polyester-polyether-polyurea-, fibers; chlorine-resistant Elastan (polyurea-polyurethane) fibers)

IT Polyurethanes, uses

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(polyester-polyurea-, fibers; chlorine-resistant Elastan (polyurea-polyurethane) fibers)

IT Polyurethanes, uses

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(polyether-polyurea-, fibers; chlorine-resistant Elastan (polyurea-polyurethane) fibers)

IT Polyureas

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(polyether-polyurethane-, fibers; chlorine-resistant Elastan (polyurea-polyurethane) fibers)

IT Polyethers, uses

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(polyurea-polyurethane-, fibers; chlorine-resistant Elastan (polyurea-polyurethane) fibers)

IT Synthetic fibers

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(polyurea-polyurethane; chlorine-resistant Elastan (polyurea-polyurethane) fibers)

IT 207921-96-8

RL: MOA (Modifier or additive use); USES (Uses)

(chlorine stabilizers for Elastan (polyurea-polyurethane) fibers)

IT 7782-50-5, Chlorine, miscellaneous

RL: MSC (Miscellaneous)

(stabilizers; chlorine stabilizers for Elastan (polyurea-polyurethane) fibers)

IT 207921-96-8

RL: MOA (Modifier or additive use); USES (Uses)

(chlorine stabilizers for Elastan (polyurea-polyurethane) fibers)

RN 207921-96-8 HCPLUS

CN Aluminate ( $\text{Al(OH)}_{63-}$ ), ( $\text{OC-6-11}$ )-, magnesium carbonate hydroxide (2:6:1:4), pentahydrate (9CI) (CA INDEX NAME)

CM 1

CRN 11097-59-9

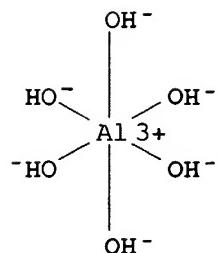
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CM 2

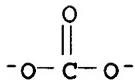
CRN 18893-33-9

CMF Al H<sub>6</sub> O<sub>6</sub>

CCI CCS



CM 3

CRN 3812-32-6  
CMF C O3

L21 ANSWER 12 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2004:200613 HCPLUS  
 DOCUMENT NUMBER: 140:237074  
 TITLE: Chlorine-proofing agents with good dispersibility in organic solvents for stable spinning of polyurethane fibers without filter clogging  
 INVENTOR(S): Miyata, Shigeo  
 PATENT ASSIGNEE(S): Kaisui Kagaku Kenkyusho K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004076207	A2	20040311	JP 2002-239279	20020820
PRIORITY APPLN. INFO.:			JP 2002-239279	20020820

OTHER SOURCE(S): MARPAT 140:237074

AB The Cl-proofing agents contain hydroxalcites  $M_2+1-xAl_x(OH)_2An-$   
 $x/n \cdot mH_2O$  ( $M = Mg$  and/or  $Zn$ ;  $An^- = n$ -valent anion;  $0 < x < 0.5$ ;  $m \geq 0$ ;  $n \geq 1$ ) which are surface treated with 0.1-10% of anionic surfactants  $R_1CONR_2R_3A$  [ $R_1 = C_{5-25}$  alkyl(ene);  $R_2 = H$ , alkyl;  $R_3 = Me$ , ether; A = (alkali salts of)  $SO_3H$  or  $CO_2H$ ]. Thus,  $Mg_0.70Al_0.30(OH)_2(CO_3)0.15 \cdot 0.55H_2O$  was treated with 1% of Na lauroyl sarcosinate (Firet L) and pulverized to give powder, 26 g of which was dispersed in 170 g of dimethylacetamide, showing permeable amount 170.1 g for filters with screen mesh 44  $\mu m$ , diameter 30 mm, and height 80 mm.

IC ICM D01F006-94

ICS C08K009-04; C08L075-04

CC 40-7 (Textiles and Fibers)

ST polyurethane fiber stable spinning chlorine proofing agent; sodium lauroyl sarcosinate treated magnesium aluminum hydroxide carbonate hydroxalcite; chlorine proofing agent anionic surfactant surface treated hydroxalcite; urethane fiber spinning chlorine proofing agent solvent dispersibility; filter clogging free chlorine proofing agent urethane fiber spinning

IT Polyurethane fibers

RL: TEM (Technical or engineered material use); USES (Uses)  
 (Cl-proofing agents containing anionic surfactant-treated hydroxalcites and showing good dispersibility in organic solvents for stable spinning of polyurethane fibers)

IT Surfactants

(anionic, hydroxalcite treated with; Cl-proofing agents containing anionic surfactant-treated hydroxalcites and showing good dispersibility in

organic solvents for stable spinning of polyurethane fibers)

IT Chemically resistant materials  
 (chlorine-proofing agents; Cl-proofing agents containing anionic surfactant-treated hydrotalcites and showing good dispersibility in organic solvents for stable spinning of polyurethane fibers)

IT Minerals, uses  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (hydrotalcite-group; Cl-proofing agents containing anionic surfactant-treated hydrotalcites and showing good dispersibility in organic solvents for stable spinning of polyurethane fibers)

IT Fatty acids, uses  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (tallow, amides with methyltaurine sodium salt, anionic surfactants; Cl-proofing agents containing anionic surfactant-treated hydrotalcites and showing good dispersibility in organic solvents for stable spinning of polyurethane fibers)

IT 137-16-6, Firet L 4316-74-9D, Methyltaurine sodium salt, amides with tallow acids 10025-06-6, Oleyl sarcosine 100091-79-0, Nissan Diapon T  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (anionic surfactants; Cl-proofing agents containing anionic surfactant-treated hydrotalcites and showing good dispersibility in organic solvents for stable spinning of polyurethane fibers)

IT 145424-07-3  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (surface treated with sodium lauroyl sarcosinate; Cl-proofing agents containing anionic surfactant-treated hydrotalcites and showing good dispersibility in organic solvents for stable spinning of polyurethane fibers)

IT 202938-68-9  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (surface treated with sodium tallow acyl methyltaurine; Cl-proofing agents containing anionic surfactant-treated hydrotalcites and showing good dispersibility in organic solvents for stable spinning of polyurethane fibers)

IT 145424-07-3  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (surface treated with sodium lauroyl sarcosinate; Cl-proofing agents containing anionic surfactant-treated hydrotalcites and showing good dispersibility in organic solvents for stable spinning of polyurethane fibers)

RN 145424-07-3 HCPLUS

CN Aluminum magnesium carbonate hydroxide, hydrate (9CI) (CA INDEX NAME)

CM 1

CRN 135752-28-2  
 CMF C O<sub>3</sub> . Al . H O . Mg  
 CCI TIS

CM 2

CRN 14280-30-9  
 CMF H O

OH-

CM 3

CRN 7439-95-4  
CMF Mg

Mg

CM 4

CRN 7429-90-5  
CMF Al

Al

CM 5

CRN 3812-32-6  
CMF C O3

O  
||  
-O-C-O-

L21 ANSWER 13 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2004:80786 HCAPLUS  
 DOCUMENT NUMBER: 140:129749  
 TITLE: Polyurethane composition,  
 polyurethane elastic fiber and use thereof  
 INVENTOR(S): Shirasu, Koji; Ishimaru, Futoshi; Oie, Takamasa;  
 Omote, Yuichiro  
 PATENT ASSIGNEE(S): Toyo Boseki Kabusiki Kaisya, Japan  
 SOURCE: PCT Int. Appl., 23 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004009705	A1	20040129	WO 2003-JP8452	20030702
W: AU, BR, CA, CH, CN, ID, IN, KR, MX, NZ, PH, RU, TR, UA, US, ZA, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
JP 2004051799	A2	20040219	JP 2002-211519	20020719
JP 2005002502	A2	20050106	JP 2003-166530	20030611

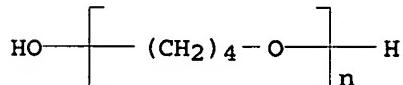
JP 2005002503	A2	20050106	JP 2003-166531	20030611
AU 2003281610	A1	20040209	AU 2003-281610	20030702
PRIORITY APPLN. INFO.:			JP 2002-211519	A 20020719
			JP 2003-166530	A 20030611
			JP 2003-166531	A 20030611
			WO 2003-JP8452	W 20030702

- AB The polyurethane composition with good chlorine embrittlement resistance, useful for swimsuit or shorts, contains 0.5-5% of a hydrotalcite compound surface-treated with water glass. Preparing an AcNMe<sub>2</sub> solution of polytetramethylene glycol-4,4'-MDI-ethylenediamine copolymer, adding antioxidant. UV absorber, and water glass-treated hydrotalcite, extrusion spinning, and oiling gave a spandex fiber with good chlorine resistance.
- IC ICM C08L075-04  
ICS C08K009-02; D01F006-94; A41B009-00; A41B017-00; A41D007-00;  
A41D031-00
- CC 40-10 (Textiles and Fibers)
- ST polyurethane elastic fiber swimsuit shorts; polytetramethylene glycol MDI ethylenediamine copolymer elastic fiber
- IT Chemically resistant materials  
(chlorine resistant; polyurethane composition,  
polyurethane elastic fiber and use thereof)
- IT Clothing  
(inner shorts; polyurethane composition, polyurethane  
elastic fiber and use thereof)
- IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyoxyalkylene-; polyurethane composition, polyurethane  
elastic fiber and use thereof)
- IT Spandex fibers  
RL: POF (Polymer in formulation); TEM (Technical or engineered material  
use); USES (Uses)  
(polyurethane composition, polyurethane elastic fiber  
and use thereof)
- IT Clothing  
(swimwear; polyurethane composition, polyurethane  
elastic fiber and use thereof)
- IT 1344-09-8, Water glass  
RL: TEM (Technical or engineered material use); USES (Uses)  
(hydrotalcite treated with; polyurethane composition,  
polyurethane elastic fiber and use thereof)
- IT 9053-66-1P, Polytetramethylene glycol-4,4'-MDI-ethylenediamine  
copolymer  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyurethane composition, polyurethane elastic fiber  
and use thereof)
- IT 12304-65-3P, Hydrotalcite  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(water glass-treated; polyurethane composition,  
polyurethane elastic fiber and use thereof)
- IT 9053-66-1P, Polytetramethylene glycol-4,4'-MDI-ethylenediamine  
copolymer  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyurethane composition, polyurethane elastic fiber  
and use thereof)
- RN 9053-66-1 HCAPLUS

CN 1,2-Ethanediamine, polymer with  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX NAME)

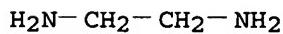
CM 1

CRN 25190-06-1  
CMF (C4 H8 O)n H2 O  
CCI PMS



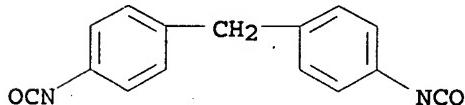
CM 2

CRN 107-15-3  
CMF C2 H8 N2



CM 3

CRN 101-68-8  
CMF C15 H10 N2 O2



IT 12304-65-3P, Hydrotalcite  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(water glass-treated; polyurethane composition,  
polyurethane elastic fiber and use thereof)

RN 12304-65-3 HCAPLUS

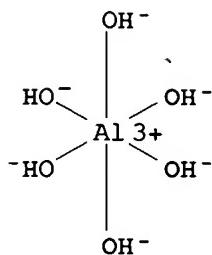
CN Hydrotalcite (Mg<sub>6</sub>(CO<sub>3</sub>)<sub>2</sub>[Al(OH)<sub>6</sub>]<sub>2</sub>(OH)<sub>4</sub>.4H<sub>2</sub>O) (9CI) (CA INDEX NAME)

CM 1

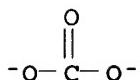
CRN 11097-59-9  
CMF C O3 . 2 Al H6 O6 . 4 H O . 6 Mg

CM 2

CRN 18893-33-9  
CMF Al H6 O6  
CCI CCS



CM 3

CRN 3812-32-6  
CMF C O3

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 14 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2003:919187 HCPLUS  
 DOCUMENT NUMBER: 141:55693  
 TITLE: Modified melt-spun spandex fiber with improved mechanical properties and its preparation  
 INVENTOR(S): Gao, Shuguang; Liu, Xiqian; Jiang, Lei  
 PATENT ASSIGNEE(S): Institute of Chemistry, Chinese Academy of Sciences, Peop. Rep. China  
 SOURCE: Faming Zhanli Shenqing Gongkai Shuomingshu, 7 pp.  
 CODEN: CNXKEV  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Chinese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1389602	A	20030108	CN 2001-115739	20010604
			CN 2001-115739	20010604

PRIORITY APPLN. INFO.: AB The modified melt spun spandex fiber is composed of polytetrahydrofuran glycol (mol. weight of 1000-2000) 20-45, 4,4'-methylenediphenylene diisocyanate 10-15, 30-100 nm nanometer powder 1-11 part, and thermoplastic polyurethane elastomer pellets 75-95%. The nanometer powder is hydrotalcite, ZnO, montmorillonite, CaCO<sub>3</sub>, SiO<sub>2</sub>, or Mg(OH)<sub>2</sub>. The process comprises mixing nanometer powder with polytetrahydrofuran glycol and 4,4'-methylenediphenylene diisocyanate at 65-75° for 1.5-3 h under bubbling N to obtain a pre-polymer; mixing with polyurethane elastomer pellets (dried at 95-100°), and spinning at 180-250° and 8-15 MPa, and spinning rate 200-1000 m-min-1.

IC ICM D01F001-10  
 ICS D01F006-70

CC 40-2 (Textiles and Fibers)

ST spandex fiber melt spun modification nanoparticle; MDI polytetramethylene glycol copolymer spandex fiber

IT Spandex fibers  
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)  
 (modified melt-spun spandex fiber with improved mech. properties and its preparation)

IT Urethane rubber, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (modified melt-spun spandex fiber with improved mech. properties and its preparation)

IT Thermoplastic rubber  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (polyurethane; modified melt-spun spandex fiber with improved mech. properties and its preparation)

IT 471-34-1, Calcium carbonate, uses 1309-42-8, Magnesium hydroxide  
 1314-13-2, Zinc oxide, uses 1318-93-0, Montmorillonite, uses 7631-86-9, Silica, uses 12304-65-3, Hydrotalcite  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (modified melt-spun spandex fiber with improved mech. properties and its preparation)

IT 9048-58-2P, 4,4'-MDI-polytetramethylene glycol copolymer  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (prepolymer, additives; modified melt-spun spandex fiber with improved mech. properties and its preparation)

IT 12304-65-3, Hydrotalcite  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (modified melt-spun spandex fiber with improved mech. properties and its preparation)

RN 12304-65-3 HCAPLUS  
 CN Hydrotalcite (Mg<sub>6</sub>(CO<sub>3</sub>)<sub>2</sub>[Al(OH)<sub>6</sub>]<sub>2</sub>(OH)<sub>4</sub>.4H<sub>2</sub>O) (9CI) (CA INDEX NAME)

CM 1



CRN 11097-59-9

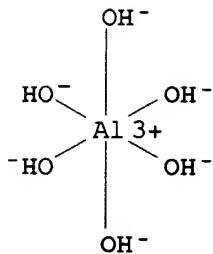
CMF C O<sub>3</sub> . 2 Al H<sub>6</sub> O<sub>6</sub> . 4 H O . 6 Mg

CM 2

CRN 18893-33-9

CMF Al H<sub>6</sub> O<sub>6</sub>

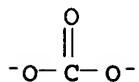
CCI CCS



CM 3

CRN 3812-32-6

CMF C O3



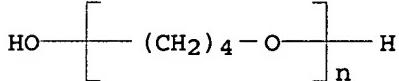
IT 9048-58-2P, 4,4'-MDI-polytetramethylene glycol copolymer  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (prepolymer, additives; modified melt-spun spandex fiber with improved mech. properties and its preparation)

RN 9048-58-2 HCPLUS

CN Poly(oxy-1,4-butanediyl),  $\alpha$ -hydro- $\omega$ -hydroxy-, polymer with 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX NAME)

CM 1

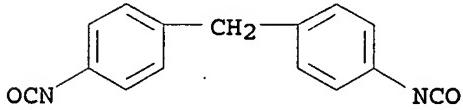
CRN 25190-06-1  
 CMF (C<sub>4</sub> H<sub>8</sub> O)<sub>n</sub> H<sub>2</sub>O  
 CCI PMS



*Polyurethane*

CM 2

CRN 101-68-8  
 CMF C<sub>15</sub> H<sub>10</sub> N<sub>2</sub> O<sub>2</sub>



L21 ANSWER 15 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:855459 HCPLUS

DOCUMENT NUMBER: 139:324669

TITLE: Chlorine- and heat-resistant polyurethane  
 spandex fibers containing melamine compound-coated  
 hydrotalcite and their manufacture

INVENTOR(S): Song, Byung Su; Lee, Tae Woo; Kim, Ji Won; Seo, Seung  
 Won; Lee, Dae Hwi

PATENT ASSIGNEE(S): Hyosung Corp., S. Korea; Doobon Inc.

SOURCE: U.S. Pat. Appl. Publ., 6 pp.  
 CODEN: USXXCO

DOCUMENT TYPE: Patent  
 LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.

KIND DATE

APPLICATION NO.

DATE

US 2003203199	A1	20031030	US 2002-253026	<u>20020924</u>
US 6692828	B2	20040217		
KR 2003085213	A	20031105	KR 2002-23400	20020429
KR 2002-23400 A 20020429				
PRIORITY APPLN. INFO.:				
AB The spandex fibers, useful for underwear, socks, and particularly, sport apparel such as swimsuits contain melamine-based compound-coated hydrotalcite $M_2^+ \cdot xAlm(OH)_y(Ak^-)z \cdot nH_2O$ ( $M_2^+$ = Mg 2+, Zn2+; Ak- = k valent anion; x, y = ≥2; z, m = pos. number). Thus, a polyurethane prepared from diphenylmethane-4,4'-diisocyanate, polytetramethylene glycol, ethylenediamine and propylenediamine was mixed with 4% hydrotalcite $Mg_6Al_2(OH)_{16}CO_3 \cdot 4H_2O$ coated with a mixture of dimelamine pyrophosphate and myristic acid-substituted melamine cyanurate and other additives, and spun to give a fiber showing good chlorine and heat resistance.				
IC ICM D02G003-00				
INCL 428375000; 264204000				
CC 40-2 (Textiles and Fibers)				
ST polyurethane spandex fiber heat resistance; melamine coated hydrotalcite spandex fiber chlorine resistance				
IT Spandex fibers				
RL: TEM (Technical or engineered material use); USES (Uses) (chlorine- and heat-resistant polyurethane spandex fibers containing melamine compound-coated hydrotalcite)				
IT Spandex fibers				
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses) (diphenylmethane diisocyanate-ethylenediamine-polyoxymethylene glycol-propylenediamine, block; chlorine- and heat-resistant polyurethane spandex fibers containing melamine compound-coated hydrotalcite)				
IT Heat-resistant materials				
(fibers; chlorine- and heat-resistant polyurethane spandex fibers containing melamine compound-coated hydrotalcite)				
IT Fibrous materials				
(heat-resistant; chlorine- and heat-resistant polyurethane spandex fibers containing melamine compound-coated hydrotalcite)				
IT Clothing				
(hosiery; chlorine- and heat-resistant polyurethane spandex fibers containing melamine compound-coated hydrotalcite for)				
IT Minerals, uses				
RL: MOA (Modifier or additive use); USES (Uses) (hydrotalcite-group, melamine compound-coated; chlorine- and heat-resistant polyurethane spandex fibers containing melamine compound-coated hydrotalcite)				
IT Clothing				
(swimwear; chlorine- and heat-resistant polyurethane spandex fibers containing melamine compound-coated hydrotalcite for)				
IT Clothing				
(underwear; chlorine- and heat-resistant polyurethane spandex fibers containing melamine compound-coated hydrotalcite for)				
IT 159018-07-2P, Diphenylmethane 4,4'-diisocyanate-ethylenediamine-polytetramethylene glycol-propylenediamine block copolymer				
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses) (fiber; chlorine- and heat-resistant polyurethane spandex fibers containing melamine compound-coated hydrotalcite)				

IT 57-11-4D, Stearic acid, melamine derivs. 108-78-1D, Melamine, derivs.  
 544-63-8D, Myristic acid, melamine derivs. 13518-93-9, Dimelamine  
 pyrophosphate 37640-57-6D, Melamine cyanurate, derivs.  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (hydrotalcite coated with; chlorine- and heat-resistant  
 polyurethane spandex fibers containing melamine compound-coated  
 hydrotalcite)

IT 11097-59-9, Aluminum magnesium carbonate hydroxide  
 (Al<sub>2</sub>Mg<sub>6</sub>(CO<sub>3</sub>)<sub>16</sub>(OH)<sub>16</sub>) 94955-62-1 140680-36-0  
 156721-37-8, Aluminum magnesium carbonate hydroxide (Al<sub>2</sub>Mg<sub>4.5</sub>(CO<sub>3</sub>)<sub>13</sub>(OH)<sub>13</sub>)  
 314269-78-8, Aluminum magnesium carbonate hydroxide (Al<sub>2</sub>Mg<sub>4</sub>(CO<sub>3</sub>)<sub>12</sub>(OH)<sub>12</sub>)  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (melamine compound-coated; chlorine- and heat-resistant  
 polyurethane spandex fibers containing melamine compound-coated  
 hydrotalcite)

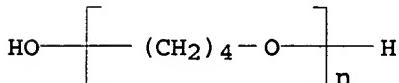
IT 159018-07-2P, Diphenylmethane 4,4'-diisocyanate-ethylenediamine-  
 polytetramethylene glycol-propylene diamine block copolymer  
 RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical  
 process); POF (Polymer in formulation); PYP (Physical process); TEM  
 (Technical or engineered material use); PREP (Preparation); PROC  
 (Process); USES (Uses)  
 (fiber; chlorine- and heat-resistant polyurethane spandex  
 fibers containing melamine compound-coated hydrotalcite)

RN 159018-07-2 HCPLUS

CN 1,2-Propanediamine, polymer with 1,2-ethanediamine,  $\alpha$ -hydro- $\omega$ -  
 hydroxypoly(oxy-1,4-butanediyl) and 1,1'-methylenebis[4-  
 isocyanatobenzene], block (9CI) (CA INDEX NAME)

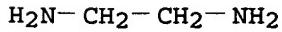
CM 1

CRN 25190-06-1  
 CMF (C<sub>4</sub> H<sub>8</sub> O)<sub>n</sub> H<sub>2</sub> O  
 CCI PMS



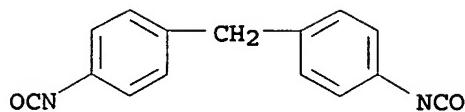
CM 2

CRN 107-15-3  
 CMF C<sub>2</sub> H<sub>8</sub> N<sub>2</sub>

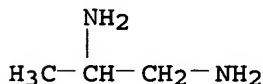


CM 3

CRN 101-68-8  
 CMF C<sub>15</sub> H<sub>10</sub> N<sub>2</sub> O<sub>2</sub>



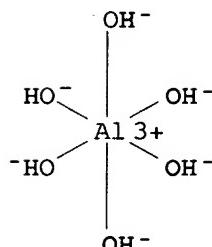
CM 4

CRN 78-90-0  
CMF C3 H10 N2IT 11097-59-9, Aluminum magnesium carbonate hydroxide  
(Al<sub>2</sub>Mg<sub>6</sub>(CO<sub>3</sub>)<sub>6</sub>(OH)<sub>16</sub>) 94955-62-1 140680-36-0RL: MOA (Modifier or additive use); USES (Uses)  
(melamine compound-coated; chlorine- and heat-resistant  
polyurethane spandex fibers containing melamine compound-coated  
hydrotalcite)

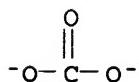
RN 11097-59-9 HCAPLUS

CN Aluminate (Al(OH)<sub>6</sub><sup>-</sup>), (OC-6-11)<sup>-</sup>, magnesium carbonate hydroxide (2:6:1:4)  
(9CI) (CA INDEX NAME)

CM 1

CRN 18893-33-9  
CMF Al H6 O6  
CCI CCS

CM 2

CRN 3812-32-6  
CMF C O3

RN 94955-62-1 HCAPLUS

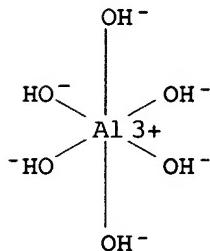
CN Aluminate ( $\text{Al(OH)}_{63-}$ ), ( $\text{OC-6-11}-$ ), magnesium carbonate (2:6:3) (9CI) (CA INDEX NAME)

CM 1

CRN 18893-33-9

CMF Al H6 O6

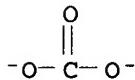
CCI CCS



CM 2

CRN 3812-32-6

CMF C O3



RN 140680-36-0 HCAPLUS

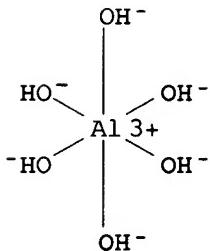
CN Aluminate ( $\text{Al(OH)}_{63-}$ ), ( $\text{OC-6-11}-$ ), magnesium carbonate hydroxide (2:8:1:8) (9CI) (CA INDEX NAME)

CM 1

CRN 18893-33-9

CMF Al H6 O6

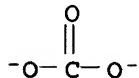
CCI CCS



CM 2

CRN 3812-32-6

CMF C O3



L21 ANSWER 16 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:299227 HCAPLUS

DOCUMENT NUMBER: 138:305483

TITLE: Polyurethane elastic fibers for swimsuits with improved resistance to chlorine comprising polyurethane elastic fibers containing metal compounds having refractive index 1.25-1.70 and specified particle diameter

INVENTOR(S): Takasugi, Takeshi; Ishimaru, Futoshi

PATENT ASSIGNEE(S): Toyobo Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003113535	A2	20030418	JP 2001-309082	20011004
			JP 2001-309082	20011004

PRIORITY APPLN. INFO.:

AB The polyurethane elastic fibers (A1) contain metal compds. (A) having refractive index ( $n$ ) 1.25-1.70, or the polyurethane elastic fibers comprise A1 fibers containing A metal compds. containing Mg, Zn, Ca, and/or Al, or the polyurethane elastic fibers comprise A1 fibers having A metal compds. having average particle diameter  $\leq 5 \mu\text{m}$ . The polyurethane elastic fibers are useful for swimsuits for swimming pools. Thus, 175.37 parts polytetramethylene glycol was copolymerd. with 38.92 parts 4,4'-diphenylmethane diisocyanate and 3.58 parts ethylenediamine to give a polyurethane (I). A solution containing I and 2.15 parts Cyanox 1790 (antioxidant), 1.08 parts Kemisorb 74 (UV stabilizer), and 3.0 parts hydrotalcite with  $n$  1.51 and average particle diameter 0.52  $\mu\text{m}$  was spun through a spinneret into an airflow at 230°, lubricated, and wound to give fibers showing tensile strength retention 88% on forming a knit of the fibers and immersing the knit in H<sub>2</sub>O with Cl content 3 ppm for 2 h at 30°.

IC ICM D01F006-94

ICS D01F006-70

CC 40-2 (Textiles and Fibers)

ST polyurethane elastic fiber swimsuit chlorine resistance enhancement; hydrotalcite chlorine resistance enhancer polyurethane elastic fiber; magnesium carbonate chlorine resistance enhancer polyurethane elastic fiber

IT Spandex fibers

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(diphenylmethane diisocyanate-ethylenediamine-polytetramethylene glycol, block; polyurethane elastic fibers for swimsuits with improved resistance to chlorine comprising polyurethane elastic fibers containing metal compds. having specified refractive index and specified particle diameter)

## IT Polyurethane fibers

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(polyurethane elastic fibers for swimsuits with improved resistance to chlorine comprising polyurethane elastic fibers containing metal compds. having specified refractive index and specified particle diameter)

## IT Clothing

(swimwear; polyurethane elastic fibers for swimsuits with improved resistance to chlorine comprising polyurethane elastic fibers containing metal compds. having specified refractive index and specified particle diameter)

## IT 107375-35-9P, 4,4'-Diphenylmethane diisocyanate-ethylenediamine-poly(tetramethylene glycol) block copolymer

RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)

(fiber; polyurethane elastic fibers for swimsuits with improved resistance to chlorine comprising polyurethane elastic fibers containing metal compds. having specified refractive index and specified particle diameter)

## IT 546-93-0, Magnesium carbonate 12304-65-3, Hydrotalcite

RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)

(polyurethane elastic fibers for swimsuits with improved resistance to chlorine comprising polyurethane elastic fibers containing metal compds. having specified refractive index and specified particle diameter)

## IT 7782-50-5, Chlorine, miscellaneous

RL: MSC (Miscellaneous)

(resistance to; polyurethane elastic fibers for swimsuits with improved resistance to chlorine comprising polyurethane elastic fibers containing metal compds. having specified refractive index and specified particle diameter)

## IT 107375-35-9P, 4,4'-Diphenylmethane diisocyanate-ethylenediamine-poly(tetramethylene glycol) block copolymer

RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)

(fiber; polyurethane elastic fibers for swimsuits with improved resistance to chlorine comprising polyurethane elastic fibers containing metal compds. having specified refractive index and specified particle diameter)

## RN 107375-35-9 HCAPLUS

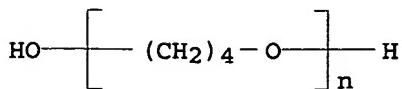
CN 1,2-Ethanediamine, polymer with  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene], block (9CI) (CA INDEX NAME)

CM 1

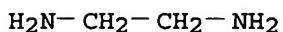
CRN 25190-06-1

CMF (C<sub>4</sub> H<sub>8</sub> O)<sub>n</sub> H<sub>2</sub> O

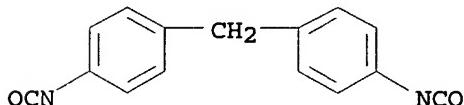
CCI PMS



CM 2

CRN 107-15-3  
CMF C2 H8 N2

CM 3

CRN 101-68-8  
CMF C15 H10 N2 O2

IT 12304-65-3, Hydrotalcite

RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)  
(polyurethane elastic fibers for swimsuits with improved  
resistance to chlorine comprising polyurethane elastic fibers  
containing metal compds. having specified refractive index and specified  
particle diameter)

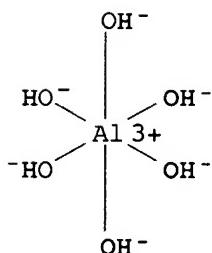
RN 12304-65-3 HCAPLUS

CN Hydrotalcite ( $\text{Mg}_6(\text{CO}_3)[\text{Al}(\text{OH})_6]_2(\text{OH})_4 \cdot 4\text{H}_2\text{O}$ ) (9CI) (CA INDEX NAME)

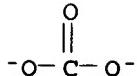
CM 1

CRN 11097-59-9  
CMF C O3 . 2 Al H6 O6 . 4 H O . 6 Mg

CM 2

CRN 18893-33-9  
CMF Al H6 O6  
CCI CCS

CM 3

CRN 3812-32-6  
CMF C O3

L21 ANSWER 17 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:299226 HCAPLUS

DOCUMENT NUMBER: 138:305482

TITLE: Polyurethane elastic fibers with good fabric qualities and dyeing colorfastness comprising polyurethane fibers exhibiting  $\zeta$  potential  $\geq 15$  mV at pH 3.0-7.0 in the delubricated state

INVENTOR(S): Takasugi, Takeshi; Ishimaru, Futoshi

PATENT ASSIGNEE(S): Toyobo Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003113533	A2	20030418	JP 2001-309083	20011004
PRIORITY APPLN. INFO.:			JP 2001-309083	20011004

AB The polyurethane elastic fibers (A1) comprise fibers exhibiting  $\zeta$  potential  $\geq 15$  mV at pH 3.0-7.0 in the delubricated state, or the polyurethane elastic fibers comprise A1 fibers containing metal compds. containing  $\geq 1$  element from the group comprising Na, Mg, Al, Si, K, Ca, Zn, and Ba, or the polyurethane elastic fibers comprise A1 polyurethane containing A metal compds. having average particle diameter  $\leq 5$   $\mu\text{m}$ . Thus, 175.37 parts polytetramethylene glycol was copolymerd. with 38.92 parts 4,4'-diphenylmethane diisocyanate and 3.58 parts ethylenediamine to give a polyurethane (I). A solution containing I and 2.15 parts Cyanox 1790 (antioxidant), 1.08 parts Kemisorb 74 (UV absorber), and 3.0 parts hydrotalcite with average particle diameter 0.52  $\mu\text{m}$  was spun through a spinneret, passed through a column at hot air temperature 230°, lubricated, and wound to give fibers showing  $\zeta$  potential 51-54 mV at pH 3.0-7.0 and showing washfastness rating (JIS L-0844-A-1) 5 (color fading) and 5 (staining) on dyeing a knit comprising the spun fibers and nylon 6 fibers with a liquid containing 1% (on fiber) Nylosan Blue N-GFL for 30 min at 95° and treating the knit with a dye-fixing solution containing tannic acid for 20 min at 80° and showing good knit texture uniformity on stretching the knit 100%.

IC ICM D01F006-70

ICS D01F006-94; D04B021-00

CC 40-2 (Textiles and Fibers)

ST polyurethane elastic fiber dyeing colorfastness enhancement; hydrotalcite polyurethane elastic fiber fabric quality enhancement; magnesium carbonate polyurethane elastic fiber

fabric quality enhancement

IT Dyeing  
 (acid; polyurethane elastic fibers with good fabric qualities and dyeing colorfastness comprising polyurethane fibers exhibiting specified  $\zeta$  potential in the delubricated state)

IT Spandex fibers  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (diphenylmethane diisocyanate-ethylenediamine-polytetramethylene glycol, block; polyurethane elastic fibers with good fabric qualities and dyeing colorfastness comprising polyurethane fibers exhibiting specified  $\zeta$  potential in the delubricated state)

IT Textiles  
 (polyurethane elastic fibers with good fabric qualities and dyeing colorfastness comprising polyurethane fibers exhibiting specified  $\zeta$  potential in the delubricated state)

IT Polyurethane fibers  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (polyurethane elastic fibers with good fabric qualities and dyeing colorfastness comprising polyurethane fibers exhibiting specified  $\zeta$  potential in the delubricated state)

IT 546-93-0, Magnesium carbonate 12304-65-3, Hydrotalcite  
 RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)  
 (additive; polyurethane elastic fibers with good fabric qualities and dyeing colorfastness comprising polyurethane fibers exhibiting specified  $\zeta$  potential in the delubricated state)

IT 107375-35-9P, 4,4'-Diphenylmethane diisocyanate-ethylenediamine-poly(tetramethylene glycol) block copolymer  
 RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
 (fiber; polyurethane elastic fibers with good fabric qualities and dyeing colorfastness comprising polyurethane fibers exhibiting specified  $\zeta$  potential in the delubricated state)

IT 12304-65-3, Hydrotalcite  
 RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)  
 (additive; polyurethane elastic fibers with good fabric qualities and dyeing colorfastness comprising polyurethane fibers exhibiting specified  $\zeta$  potential in the delubricated state)

RN 12304-65-3 HCPLUS

CN Hydrotalcite ( $Mg_6(CO_3)[Al(OH)_6]_2(OH)_{4.4}H_2O$ ) (9CI) (CA INDEX NAME)

CM 1

CRN 11097-59-9

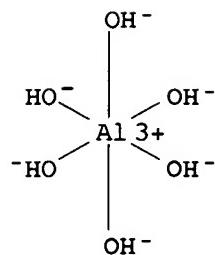
CMF C O3 . 2 Al H6 O6 . 4 H O . 6 Mg

CM 2

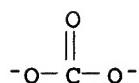
CRN 18893-33-9

CMF Al H6 O6

CCI CCS



CM 3

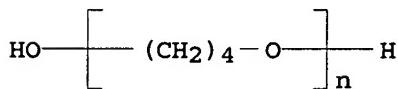
CRN 3812-32-6  
CMF C O3

IT 107375-35-9P, 4,4'-Diphenylmethane diisocyanate-ethylenediamine-poly(tetramethylene glycol) block copolymer  
 RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
 (fiber; polyurethane elastic fibers with good fabric qualities and dyeing colorfastness comprising polyurethane fibers exhibiting specified  $\zeta$  potential in the delubricated state)

RN 107375-35-9 HCPLUS

CN 1,2-Ethanediamine, polymer with  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene], block (9CI) (CA INDEX NAME)

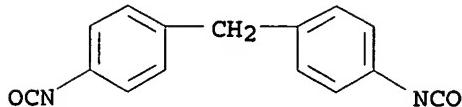
CM 1

CRN 25190-06-1  
CMF (C4 H8 O)n H2 O  
CCI PMS

CM 2

CRN 107-15-3  
CMF C2 H8 N2 $\text{H}_2\text{N}-\text{CH}_2-\text{CH}_2-\text{NH}_2$

CM 3

CRN 101-68-8  
CMF C15 H10 N2 O2

L21 ANSWER 18 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:299088 HCPLUS

DOCUMENT NUMBER: 138:305480

TITLE: Polyurethane compositions with good discoloration and chlorine resistance and their elastic fibers

INVENTOR(S): Takasugi, Takeshi; Ishimaru, Futoshi

PATENT ASSIGNEE(S): Toyobo Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXXAF

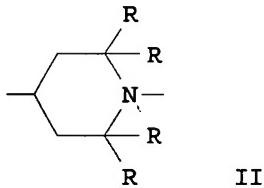
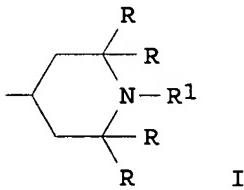
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003113303	A2	20030418	JP 2001-309085	20011004
PRIORITY APPLN. INFO.:				
OTHER SOURCE(S):	MARPAT 138:305480			
GI				



AB The polyurethane compns. contain (a) hindered amines having monovalent organic groups I (R = C1-4 alkyl; R1 = H, C1-4 alkyl, C1-10 alkoxy) and/or divalent organic groups II (R = C1-4 alkyl) satisfying these organic group content  $\geq 1.3$  mol per 1 kg hindered amines and solubility in acid solns.  $\leq 5.0 + 10^{-3}$  equivalent/l, (b) phenol-based antioxidants, (c) phosphite ester antioxidants, and (d) inorg. Cl degradation prevention agents containing Na, Mg, Al, Si, K, Ca, Zn, and/or Ba. Thus, a composition containing diethylamine-terminated ethylenediamine-MDI-polytetramethylene glycol block copolymer, Cyanox 1790 [1,3,5-Tris(4-tert-butyl-3-hydroxy-2,6-dimethylbenzyl) isocyanurate], JPH 3800 (hydrogenated bisphenol A-pentaerythritol phosphite polymer), and hydrotalcite [ $Mg_6Al_2(OH)_{16}CO_3 \cdot 4H_2O$ ] was spun to give a spandex fiber with good nitrogen oxide discoloration and Cl resistance before and after

dyeing.

IC ICM C08L075-04  
ICS C08K003-22; C08K005-13; C08K005-17; C08K005-524; D01F006-94;  
D01F006-70

CC 40-2 (Textiles and Fibers)

ST polyurethane fiber spandex chlorine discoloration resistance;  
ethylenediamine MDI polytetramethylene glycol block fiber ethylamine;  
butyl methylbenzyl isocyanurate bisphenol pentaerythritol phosphite  
antioxidant; hydrotalcite chlorine degrdn prevention polyurethane  
spandex fiber

IT Zeolites (synthetic), uses  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material  
use); USES (Uses)  
(Cl degradation prevention agent; polyurethane compns. with good  
discoloration and chlorine resistance for elastic fibers)

IT Phenols, uses  
Phosphites  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material  
use); USES (Uses)  
(antioxidants; polyurethane compns. with good discoloration  
and chlorine resistance for elastic fibers)

IT Spandex fibers  
RL: TEM (Technical or engineered material use); USES (Uses)  
(diphenylmethane diisocyanate-ethylenediamine-polytetramethylene  
glycol, block; polyurethane compns. with good discoloration  
and chlorine resistance for elastic fibers)

IT Amines, uses  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material  
use); USES (Uses)  
(hindered, discoloration prevention agent; polyurethane  
compns. with good discoloration and chlorine resistance for elastic  
fibers)

IT Antioxidants  
Discoloration prevention agents  
(polyurethane compns. with good discoloration and chlorine  
resistance for elastic fibers)

IT 546-93-0, Magnesium carbonate 1305-78-8, Calcium oxide, uses  
1309-48-4, Magnesium oxide, uses 1314-13-2, Zinc oxide, uses  
12304-65-3, Hydrotalcite 16389-88-1, Dolomite, uses  
35112-53-9, Barium thiosulfate 58169-94-1, Magnesium zinc oxide  
95032-68-1, Aluminum magnesium oxide (Al<sub>4</sub>Mg<sub>5</sub>O<sub>11</sub>)  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material  
use); USES (Uses)  
(Cl degradation prevention agent; polyurethane compns. with good  
discoloration and chlorine resistance for elastic fibers)

IT 26063-63-8, JPH 3800 26741-53-7, Bis(2,4-di-tert-butylphenyl)-  
pentaerythritol diphosphite 40601-76-1, Cyanox 1790 107314-03-4,  
p-Chloromethylstyrene-p-cresol copolymer  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material  
use); USES (Uses)  
(antioxidant; polyurethane compns. with good discoloration  
and chlorine resistance for elastic fibers)

IT 278182-70-0P, ADK Stab LA 87-cyclohexyl methacrylate copolymer acetic acid  
salt  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(discoloration prevention agent; polyurethane compns. with  
good discoloration and chlorine resistance for elastic fibers)

IT 246245-79-4P, ADK Stab LA 87-cyclohexyl methacrylate copolymer  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT

(Reactant or reagent)

(discoloration prevention agent; polyurethane compns. with  
good discoloration and chlorine resistance for elastic fibers)

IT 109-89-7DP, Diethylamine, reaction products with polyurethane  
 107375-35-9DP, Ethylenediamine-MDI-polytetramethylene glycol block  
 copolymer, reaction products with diethylamine  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
 (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (fiber; polyurethane compns. with good discoloration and  
 chlorine resistance for elastic fibers)

IT 12304-65-3, Hydrotalcite  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material  
 use); USES (Uses)

(Cl degradation prevention agent; polyurethane compns. with good  
discoloration and chlorine resistance for elastic fibers)

RN 12304-65-3 HCPLUS

CN Hydrotalcite ( $Mg_6(CO_3)[Al(OH)_6]_2(OH)_4 \cdot 4H_2O$ ) (9CI) (CA INDEX NAME)

CM 1

CRN 11097-59-9

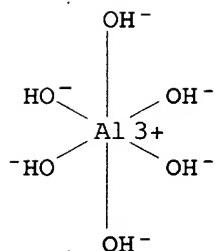
CMF C O3 . 2 Al H6 O6 . 4 H O . 6 Mg

CM 2

CRN 18893-33-9

CMF Al H6 O6

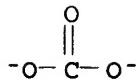
CCI CCS



CM 3

CRN 3812-32-6

CMF C O3



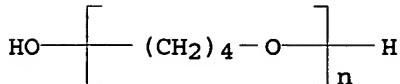
IT 107375-35-9DP, Ethylenediamine-MDI-polytetramethylene glycol block  
 copolymer, reaction products with diethylamine  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
 (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (fiber; polyurethane compns. with good discoloration and  
 chlorine resistance for elastic fibers)

RN 107375-35-9 HCPLUS

CN 1,2-Ethanediamine, polymer with  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene], block (9CI) (CA INDEX NAME)

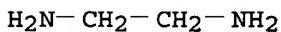
CM 1

CRN 25190-06-1  
CMF (C<sub>4</sub> H<sub>8</sub> O)<sub>n</sub> H<sub>2</sub> O  
CCI PMS



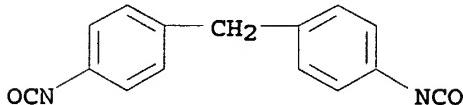
CM 2

CRN 107-15-3  
CMF C<sub>2</sub> H<sub>8</sub> N<sub>2</sub>



CM 3

CRN 101-68-8  
CMF C<sub>15</sub> H<sub>10</sub> N<sub>2</sub> O<sub>2</sub>



L21 ANSWER 19 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2003:299087 HCPLUS  
 DOCUMENT NUMBER: 138:305479  
 TITLE: Polyurethane composition containing  
       hydrotalcite and spandex fiber  
 INVENTOR(S): Takasugi, Takeshi; Ishimaru, Futoshi  
 PATENT ASSIGNEE(S): Toyobo Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

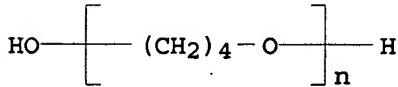
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003113302	A2	20030418	JP 2001-309084	20011004
PRIORITY APPLN. INFO.:			JP 2001-309084	20011004
AB	The polyurethane composition contains hydrotalcite particles with Mg/Al (mol) 2.2-5.0 and average particle diameter $\leq$ 2 $\mu$ m wherein the			

particles contain  $\leq 10$  volume% of them with diameter  $\geq 2 \mu\text{m}$ . The spandex fiber is made of the composition showing enhanced stability in Cl-containing water, which is suitable for swimming suits, etc. Thus, a N,N-dimethylacetamide solution of a block copolymer comprising polytetramethylene glycol 175.37, 4,4'-diphenylmethane diisocyanate 38.92, and ethylenediamine 3.58 parts containing 3.0 parts hydrotalcite (Mg/Al 3.0, average particle diameter 0.52  $\mu\text{m}$ ) was spun and wound to give spandex fibers, which were made into a knit showing retention of tenacity of filaments after 72-h in water containing 3 ppm Cl at 30°.

IC ICM C08L075-04  
 ICS C08K003-26; D01F006-94; D01F006-70  
 CC 40-2 (Textiles and Fibers)  
 Section cross-reference(s): 37  
 ST polyurethane compn hydrotalcite spandex fiber; chlorine water tenacity retention spandex fiber; aluminum magnesium carbonate hydroxide spandex fiber  
 IT Spandex fibers  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (polyurethane composition containing hydrotalcite for spandex fiber showing resistance to chlorine)  
 IT Clothing  
 (swimwear; polyurethane composition containing hydrotalcite for spandex fiber showing resistance to chlorine for)  
 IT 107375-35-9P, 4,4'-Diphenylmethane diisocyanate-ethylenediamine-polytetramethylene glycol block copolymer  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (fiber; polyurethane composition containing hydrotalcite for spandex fiber showing resistance to chlorine)  
 IT 135752-28-2, Aluminum magnesium carbonate hydroxide  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (polyurethane composition containing hydrotalcite for spandex fiber showing resistance to chlorine)  
 IT 107375-35-9P, 4,4'-Diphenylmethane diisocyanate-ethylenediamine-polytetramethylene glycol block copolymer  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (fiber; polyurethane composition containing hydrotalcite for spandex fiber showing resistance to chlorine)  
 RN 107375-35-9 HCPLUS  
 CN 1,2-Ethanediamine, polymer with  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene], block (9CI) (CA INDEX NAME)

CM 1

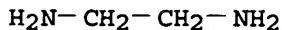
CRN 25190-06-1  
 CMF (C<sub>4</sub> H<sub>8</sub> O)<sub>n</sub> H<sub>2</sub> O  
 CCI PMS



CM 2

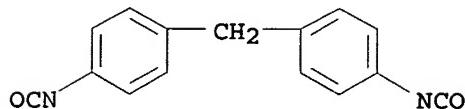
CRN 107-15-3

CMF C2 H8 N2



CM 3

CRN 101-68-8  
 CMF C15 H10 N2 O2



IT 135752-28-2, Aluminum magnesium carbonate hydroxide  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (polyurethane composition containing hydrotalcite for spandex fiber  
 showing resistance to chlorine)  
 RN 135752-28-2 HCPLUS  
 CN Aluminum magnesium carbonate hydroxide (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
HO	x	14280-30-9
Mg	x	7439-95-4
Al	x	7429-90-5
CO <sub>3</sub>	x	3812-32-6

L21 ANSWER 20 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2003:287095 HCPLUS  
 DOCUMENT NUMBER: 138:305259  
 TITLE: Sheet-type composites with excellent degradability in natural environment and printed matters thereof  
 INVENTOR(S): Kano, Toshiya  
 PATENT ASSIGNEE(S): Hiraoka and Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 21 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003112378	A2	20030415	JP 2001-306675	20011002
PRIORITY APPLN. INFO.:			JP 2001-306675	20011002

AB The composites consist of ≥1 base fabric and ≥1 coating layer containing binders and fine particles, where the fabric contains naturally degradable substances, the binder contains naturally degradable resins as the base component, and the content and distribution of the degradable substances and resins are those to the composites be broken down in natural environment. Land reclamation materials from the waste of the composites or printed matters are also claimed. Thus, 96% L-lactic

acid and 4% polyethylene glycol were copolymerized, melt-spun, and treated with poly(vinyl alc.) size to give multifilaments, which were woven, dipped in a coating solution of poly-L-lactic acid emulsion (Landy CP 05A; 40% solid) 175, nonyellowing ester resin (Adeka Bon-Tighter HUX 290H; 62% solid) 32, CMC (Cellogen WS) 10, CaCO<sub>3</sub> ( $\mu$ -Powder 90) 34, N-containing polymer ink set (Sumirez Resin 1001; 30% solid) 2, polyacrylate salt dispersant (Sumirez Resin DS 10; 40% solid) 1, and fluorescent brightener 0.5 part, drafted, squeezed, and dried to give a sheet showing good printability and degradability in the soil.

- IC ICM B32B005-02
- ICS C08K003-00; C08L101-00; D04H001-40; D06M011-11; D06M011-36; D06M011-77; D06M011-80; D06P005-00
- CC 38-3 (Plastics Fabrication and Uses)  
Section cross-reference(s): 40
- ST degradable polylactic acid fabric coating printability; CMC blend polylactic acid coating biodegradable
- IT Cotton fibers  
(Cottoace CO 80S/A18, lactic acid-polyethylene glycol fiber blends, fabrics; naturally degradable sheets with good printability)
- IT Synthetic rubber, uses  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(carbon monoxide-ethylene-vinyl acetate, Elvaloy 742, coatings containing, naturally degradable sheets with good printability)
- IT Wheat flour  
(coatings containing; naturally degradable sheets with good printability)
- IT Polyesters, uses  
Polyketones  
Polyurethanes, uses  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(coatings containing; naturally degradable sheets with good printability)
- IT Fibroin  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(coatings containing; naturally degradable sheets with good printability)
- IT Nonwoven fabrics  
(cotton; naturally degradable sheets with good printability)
- IT Soybean oil  
RL: TEM (Technical or engineered material use); USES (Uses)  
(inks containing; naturally degradable sheets with good printability)
- IT Vinal fibers  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(lactic acid-polyethylene glycol fiber blends, fabrics; naturally degradable sheets with good printability)
- IT Polyester fibers, uses  
Synthetic polymeric fibers, uses  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(lactic acid-polyethylene glycol, fabrics; naturally degradable sheets with good printability)
- IT Biodegradable materials  
Nonwoven fabrics  
(naturally degradable sheets with good printability)
- IT Urethane rubber, uses  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(polyester-, Estane 54610, coatings containing; naturally degradable sheets with good printability)

- IT **Polyurethanes, uses**  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (polyester-, coatings containing; naturally degradable sheets with good printability)
- IT **Polyoxalkylenes, uses**  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (polyester-, fiber, lactic acid-polyethylene glycol, fabrics; naturally degradable sheets with good printability)
- IT **98036-77-2**  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (Alcamizer, coatings containing; naturally degradable sheets with good printability)
- IT **26161-42-2, Poly(L-lactic acid), sru**  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (Landy CP 05A, coatings containing; naturally degradable sheets with good printability)
- IT **25777-14-4**  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (assumed monomers, coatings containing; naturally degradable sheets with good printability)
- IT **25052-62-4, Carbon monoxide-ethylene copolymer**  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (coatings containing, Ecolyte PE; naturally degradable sheets with good printability)
- IT **9004-34-6, KC Flock W 400G, uses 26247-20-1, Bionolle 1020 26337-35-9, Carbon monoxide-ethylene-vinyl acetate copolymer 26811-96-1, L-Lactic acid homopolymer 80181-31-3, Biopol D 411G 133516-66-2, ADEKA Bon-Tighter HUX 290H**  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (coatings containing; naturally degradable sheets with good printability)
- IT **102-54-5, Ferrocene 471-34-1,  $\mu$ -Powder 90, uses 7631-86-9, Nipsil E 170, uses 9004-32-4, Cellogen WS 21645-51-2, Higilite H 43, uses**  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (coatings containing; naturally degradable sheets with good printability)
- IT **9005-25-8, Starch, uses**  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (coatings containing; naturally degradable sheets with good printability)
- IT **222832-26-0, L-Lactic acid-polyethylene glycol block copolymer**  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (fiber, fabrics; naturally degradable sheets with good printability)
- IT **9002-89-5, Poly(vinyl alcohol)**  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (fiber, lactic acid-polyethylene glycol fiber blends, fabrics; naturally degradable sheets with good printability)
- IT **98036-77-2**  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (Alcamizer, coatings containing; naturally degradable sheets with good printability)
- RN **98036-77-2 HCPLUS**

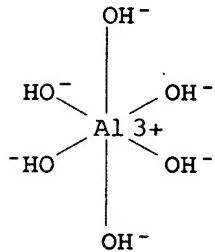
CN Aluminate ( $\text{Al(OH)}_{63-}$ ), ( $\text{OC-6-11}$ )-, magnesium carbonate hydroxide (4:9:2:2)  
(9CI) (CA INDEX NAME)

CM 1

CRN 18893-33-9

CMF Al H6 O6

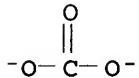
CCI CCS



CM 2

CRN 3812-32-6

CMF C O3



L21 ANSWER 21 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2002:963823 HCPLUS  
 DOCUMENT NUMBER: 138:40335  
 TITLE: Laminated sheets for marking sheets and marking sheet-attached cloths  
 INVENTOR(S): Hayashi, Toru  
 PATENT ASSIGNEE(S): Bando Chemical Industries, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002366039	A2	20021220	JP 2001-173757	20010608
PRIORITY APPLN. INFO.:			JP 2001-173757	20010608

AB Title sheets comprise marking sheets and peelable substrates, wherein the marking sheets comprise colored thermoplastic resin layers/polyester elastomer layers/optionally aluminum and/or hydrotalcite containing layers/hot melt adhesive layers. Thus, Lesamine ME 3134LP containing TiO2 was applied on a PET substrate, Pelprene P 280B polyester elastomer was formed thereon using Pelprene P 75M adhesive, and PH 419 hot melt adhesive was applied thereon to give a laminated sheet showing good dye migration prevention from a dyed cloth.

IC ICM G09F003-10  
ICS B32B007-06; C09J007-02; G09F003-02  
CC 38-3 (Plastics Fabrication and Uses)  
Section cross-reference(s): 39, 40  
ST laminated marking sheet cloth; Lesamine Pelprene elastomer hot melt adhesive laminate sheet prep  
IT Polyester rubber  
RL: TEM (Technical or engineered material use); USES (Uses)  
(adhesive, Pelprene P 75M; preparation of laminated sheets for marking sheets and marking sheet-attached cloths)  
IT Polyester rubber  
Synthetic rubber, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(butanediol-polytetramethylene glycol-terephthalic acid, block, Pelprene P 280B, dye migration preventing layers; preparation of laminated sheets for marking sheets and marking sheet-attached cloths)  
IT Polyester rubber  
RL: TEM (Technical or engineered material use); USES (Uses)  
(dye migration preventing layers; preparation of laminated sheets for marking sheets and marking sheet-attached cloths)  
IT Polyesters, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(hot melt adhesives; preparation of laminated sheets for marking sheets and marking sheet-attached cloths)  
IT Adhesives  
(hot-melt; preparation of laminated sheets for marking sheets and marking sheet-attached cloths)  
IT Laminated plastic films  
Textiles  
(preparation of laminated sheets for marking sheets and marking sheet-attached cloths)  
IT Marking  
(sheets; preparation of laminated sheets for marking sheets and marking sheet-attached cloths)  
IT Polyesters, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(substrate; preparation of laminated sheets for marking sheets and marking sheet-attached cloths)  
IT Pigments, nonbiological  
(surface layer containing; preparation of laminated sheets for marking sheets  
and marking sheet-attached cloths)  
IT Polyurethanes, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(thermoplastic, colored surface layer; preparation of laminated sheets for marking sheets and marking sheet-attached cloths)  
IT Plastics, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(thermoplastics, colored surface layers; preparation of laminated sheets for marking sheets and marking sheet-attached cloths)  
IT 1344-28-1, Kyowaad 200, uses 11097-59-9, Kyowaad 500  
RL: TEM (Technical or engineered material use); USES (Uses)  
(adhesive layer containing; preparation of laminated sheets for marking sheets  
and marking sheet-attached cloths)  
IT 229983-53-3, Resamine ME 3134LP  
RL: TEM (Technical or engineered material use); USES (Uses)  
(colored surface layer; preparation of laminated sheets for marking sheets  
and marking sheet-attached cloths)  
IT 339080-17-0, PH 419

RL: TEM (Technical or engineered material use); USES (Uses)  
 (hot melt adhesive; preparation of laminated sheets for marking sheets and  
 marking sheet-attached cloths)

IT 13463-67-7, Titanium oxide, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (pigment, surface layer containing; preparation of laminated sheets for  
 marking  
 sheets and marking sheet-attached cloths)

IT 106159-00-6, Butanediol-polytetramethylene glycol-terephthalic acid block  
 copolymer  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (rubber, dye migration preventing layers; preparation of laminated sheets  
 for marking sheets and marking sheet-attached cloths)

IT 25038-59-9, Poly(ethylene terephthalate), uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (substrate; preparation of laminated sheets for marking sheets and marking  
 sheet-attached cloths)

IT 11097-59-9, Kyowaad 500  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (adhesive layer containing; preparation of laminated sheets for marking  
 sheets  
 and marking sheet-attached cloths)

RN 11097-59-9 HCPLUS

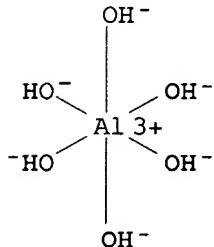
CN Aluminate ( $\text{Al(OH)}_{63-}$ ), ( $\text{OC-6-11}$ ) $^-$ , magnesium carbonate hydroxide (2:6:1:4)  
 (9CI) (CA INDEX NAME)

CM 1

CRN 18893-33-9

CMF Al H6 O6

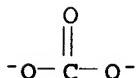
CCI CCS



CM 2

CRN 3812-32-6

CMF C O3



L21 ANSWER 22 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2002:946362 HCPLUS  
 DOCUMENT NUMBER: 138:25741

TITLE: Spandex containing mixture of phenolic compounds with  
 good resistance to degradation by chlorine and by fume  
 INVENTOR(S): Houser, Nathan E.; Selling, Gordon W.  
 PATENT ASSIGNEE(S): E. I. Du Pont de Nemours & Co., USA  
 SOURCE: PCT Int. Appl., 25 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002098970	A1	20021212	WO 2002-US17561	20020604
W: BR, CN, JP, KR, TR RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
US 2003073772	A1	20030417	US 2002-162360	20020603
US 6846866	B2	20050125		
EP 1401946	A1	20040331	EP 2002-734662	20020604
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
CN 1513026	A	20040714	CN 2002-811335	20020604
BR 2002010244	A	20040810	BR 2002-10244	20020604
JP 2004528471	T2	20040916	JP 2003-502086	20020604
TW 593479	B	20040621	TW 2002-91112122	20020605
PRIORITY APPLN. INFO.:			US 2001-295966P	P 20010605
			WO 2002-US17561	W 20020604

- AB The composition, useful for forming spandex, comprises a polyurethane and additives containing (a) a first additive with mol. weight  $\geq 300$  Daltons having  $\geq 1$  monohindered hydroxyphenyl group; (b) a second additive selected from (i) condensation polymers of p-cresol and divinyl benzene and (ii) compds. with mol. weight  $\geq 300$  Daltons having  $\geq 1$  unsym. dihindered hydroxyphenyl group; and (c) an inorg. chlorine-resist additive. The polyurethane exhibits improved resistance to degradation by chlorine and by atmospheric fumes. Thus, a polyurethane solution prepared from poly(tetramethylene ether) glycol, MDI, ethylenediamine and 2-methylpentamethylenediamine was mixed with Ultracarb UF (hunite and hydromagnesite) 4, Cyanox 1790 1.5, Hostanox 03 0.25, titanium dioxide 0.3, Methacrol 2462B (bis(isocyanatocyclohexyl)methane-3-tert-butyl-3-aza-1,5-pentanediol copolymer) 0.5 and silicone oil 0.3%, and dry spun to give spandex fibers with good resistance to degradation by chlorine and by atmospheric fume.
- IC ICM C08K013-02  
ICS C08L075-04; C08K013-02; C08K003-26; C08K005-13
- CC 40-2 (Textiles and Fibers)
- ST spandex fiber chlorine resistance; polyurethane polyurea spandex fiber phenolic additive
- IT Carbonates, uses  
Hydroxides (inorganic)  
Oxides (inorganic), uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(Group II and IIb metals; spandex containing mixture of phenolic compds. with  
good resistance to degradation by chlorine and by atmospheric fume)
- IT Spandex fibers  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(diphenylmethane diisocyanate-ethylenediamine-methylpentamethylenediamine-polytetramethylene glycol, block; spandex

containing mixture of phenolic compds. with good resistance to degradation by chlorine and by atmospheric fume)

IT Spandex fibers  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (spandex containing mixture of phenolic compds. with good resistance to degradation by chlorine and by atmospheric fume)

IT 61318-16-9, p-Cresol-divinylbenzene copolymer  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (Methacrol 2390; spandex containing mixture of phenolic compds. with good resistance to degradation by chlorine and by atmospheric fume)

IT 132937-65-6P  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (fiber; spandex containing mixture of phenolic compds. with good resistance to degradation by chlorine and by atmospheric fume)

IT 12304-65-3P, Hydrotalcite  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (spandex containing mixture of phenolic compds. with good resistance to degradation by chlorine and by atmospheric fume)

IT 85-60-9, Lowinox 44B25 1314-13-2, Zinc oxide, uses 1843-03-4, Lowinox CA 22 12072-90-1, Hydromagnesite 19569-21-2, Huntite 31314-21-3, Ethylene bis(3,3-bis[3-tert-butyl-4-hydroxyphenyl]butyrate 32509-66-3 34411-55-7, Methacrol 2462B 36443-68-2, Irganox 245 40601-76-1, Cyanox 1790 189021-51-0, Ultracarb UF  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (spandex containing mixture of phenolic compds. with good resistance to degradation by chlorine and by atmospheric fume)

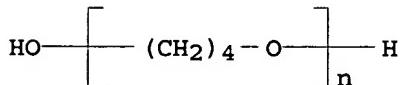
IT 132937-65-6P  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (fiber; spandex containing mixture of phenolic compds. with good resistance to degradation by chlorine and by atmospheric fume)

RN 132937-65-6 HCPLUS

CN 1,5-Pantanediamine, 2-methyl-, polymer with 1,2-ethanediamine,  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene], block (9CI) (CA INDEX NAME)

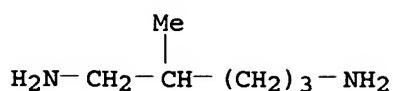
CM 1

CRN 25190-06-1  
 CMF (C<sub>4</sub> H<sub>8</sub> O)<sub>n</sub> H<sub>2</sub> O  
 CCI PMS

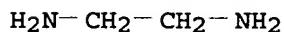


CM 2

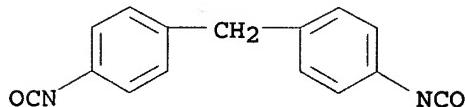
CRN 15520-10-2  
 CMF C<sub>6</sub> H<sub>16</sub> N<sub>2</sub>



CM 3

CRN 107-15-3  
CMF C2 H8 N2

CM 4

CRN 101-68-8  
CMF C15 H10 N2 O2

IT 12304-65-3P, Hydrotalcite

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (spandex containing mixture of phenolic compds. with good resistance to degradation by chlorine and by atmospheric fume)

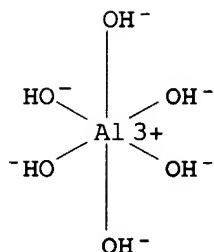
RN 12304-65-3 HCAPLUS

CN Hydrotalcite ( $\text{Mg}_6(\text{CO}_3)[\text{Al}(\text{OH})_6]_2(\text{OH})_4 \cdot 4\text{H}_2\text{O}$ ) (9CI) (CA INDEX NAME)

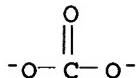
CM 1

CRN 11097-59-9  
CMF C O3 . 2 Al H6 O6 . 4 H O . 6 Mg

CM 2

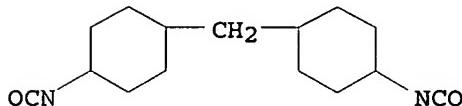
CRN 18893-33-9  
CMF Al H6 O6  
CCI CCS

CM 3

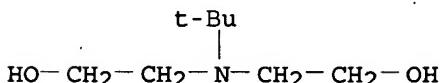
CRN 3812-32-6  
CMF C O3

IT 34411-55-7, Methacrol 2462B  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (spandex containing mixture of phenolic compds. with good resistance to  
 degradation by chlorine and by atmospheric fume)  
 RN 34411-55-7 HCAPLUS  
 CN Ethanol, 2,2'-[{(1,1-dimethylethyl)imino]bis-, polymer with  
 1,1'-methylenebis[4-isocyanatocyclohexane] (9CI) (CA INDEX NAME)

CM 1

CRN 5124-30-1  
CMF C15 H22 N2 O2

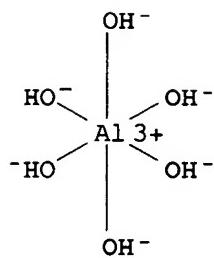
CM 2

CRN 2160-93-2  
CMF C8 H19 N O2

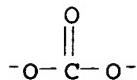
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 23 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2002:925319 HCAPLUS  
 DOCUMENT NUMBER: 138:5556  
 TITLE: Composition of an elastic fiber which can resist water containing chlorine and thread manufacture  
 PATENT ASSIGNEE(S): Fillattice S.p.A., Italy  
 SOURCE: Eur. Pat. Appl., 8 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1262499	A1	20021204	EP 2002-11507	20020522
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
BR 2002002065	A	20030422	BR 2002-2065	20020529
CA 2388289	AA	20021130	CA 2002-2388289	20020530
PRIORITY APPLN. INFO.:			IT 2001-MI1144	A 20010530
AB	Composition containing polyurethane and hydrotalcite to give elastic thread resistance to the action of the Cl by dry or fused spinning, or spinning from solution in which the average grain size of the hydrotalcite added			
	to the polyurethane is <1 µm and preferably <0.8 µm. Thus, a thread was spun from ethylenediamine-extended MDI-THF prepolymer and a 3% dispersion of hydrotalcite (grain size 0.55 µm).			
IC	ICM C08G018-10			
CC	ICS C08G018-48; C08K003-22; D01F001-10; D01F006-70 40-2 (Textiles and Fibers)			
ST	polyurethane elastic thread hydrotalcite contg; chlorine water resistance polyurethane thread			
IT	Spandex fibers			
	RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (containing hydrotalcite can resist water containing chlorine)			
IT	Minerals, uses			
	RL: MOA (Modifier or additive use); USES (Uses) (hydrotalcite-group; Spandex containing hydrotalcite can resist water containing chlorine)			
IT	12304-65-3, Hydrotalcite			
	RL: MOA (Modifier or additive use); USES (Uses) (Spandex containing hydrotalcite can resist water containing chlorine)			
IT	101-68-8DP, MDI, polymer with butanediol and polyester polyol 110-63-4DP, 1,4-Butanediol, polymer with MDI and polyester polyol 116461-73-5P, Ethylenediamine-MDI-THF block copolymer			
	RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses) (fiber; Spandex containing hydrotalcite can resist water containing chlorine)			
IT	12304-65-3, Hydrotalcite			
	RL: MOA (Modifier or additive use); USES (Uses) (Spandex containing hydrotalcite can resist water containing chlorine)			
RN	12304-65-3 HCPLUS			
CN	Hydrotalcite (Mg <sub>6</sub> (CO <sub>3</sub> ) <sub>2</sub> [Al(OH) <sub>6</sub> ] <sub>2</sub> (OH) <sub>4</sub> .4H <sub>2</sub> O) (9CI) (CA INDEX NAME)			
CM	1			
CRN	11097-59-9			
CMF	C O <sub>3</sub> . 2 Al H <sub>6</sub> O <sub>6</sub> . 4 H O . 6 Mg			
CM	2			
CRN	18893-33-9			
CMF	Al H <sub>6</sub> O <sub>6</sub>			
CCI	CCS			



CM 3

CRN 3812-32-6  
CMF C O3

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 24 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2002:901243 HCPLUS  
 DOCUMENT NUMBER: 137:385937  
 TITLE: Polyurethane elastomeric fibers with good chlorine-resistance, production method thereof, and fabrics and swimwear therewith  
 INVENTOR(S): Uemura, Yuji; Nishikawa, Hiroshi; Umezawa, Masao  
 PATENT ASSIGNEE(S): Du Pont-Toray Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002339166	A2	20021127	JP 2002-64863	20020311
CN 1396320	A	20030212	CN 2002-119822	20020314

PRIORITY APPLN. INFO.: JP 2001-71881 A 20010314  
 AB Title fibers comprise polyurethaneureas and polyurethanes. Thus, 1800 g 35%-solids polyurethaneurea solution obtained from polytetramethylene glycol with mol. weight 1800, 4,4'-diphenylmethane diisocyanate, ethylenediamine, and diethylenetriamine and 970 g 35%-solids polyurethane solution obtained from polytetramethylene glycol with mol. weight 2900, 4,4'-diphenylmethane diisocyanate, and ethylene glycol were mixed, 3% zinc oxide was added therein, dry-spun, and blended to give a polyurethane thread (fineness 44 dtex and number of filaments 4) with strength 47 cN, stress relaxation 30%, set property 20%, elongation 458%, Cl-stiffening resistance time 138 h, and heat set property 65%, which was knitted with a polyamide thread (fineness 50 dtex and number of filaments 17) obtained from polyhexamethylene adipamide to give a swimwear with good Cl-resistance and

feelings.

IC ICM D01F006-94  
ICS A41D007-00; A41D031-00; D03D015-08; D04B001-18; D04B021-00

CC 40-2 (Textiles and Fibers)  
Section cross-reference(s): 57

ST polyurethane elastomeric fiber prep chlorine resistance fabric  
swimwear; polytetramethylene glycol MDI ethylenediamine diethylenetriamine  
polyurethaneurea prep; diphenylmethane diisocyanate  
polytetramethylene glycol polyurethane polyurethaneurea  
fiber prep

IT Polyamide fibers, uses  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(66; preparation of polyurethane elastomeric fibers for fabrics and swimwear)

IT Spandex fibers  
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(diethylenetriamine-diphenylmethane diisocyanate-ethylenediamine-polytetramethylene glycol, block, from polyurethaneurea-polyurethane blend; preparation of polyurethane elastomeric fibers for fabrics and swimwear)

IT Spandex fibers  
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(diphenylmethane diisocyanate-ethylene glycol-polytetramethylene glycol, block, fiber, from polyurethaneurea-polyurethane blend; preparation of polyurethane elastomeric fibers for fabrics and swimwear)

IT Polyamides, uses  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(fiber; preparation of polyurethane elastomeric fibers for fabrics and swimwear)

IT Spandex fibers  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(from polyurethane-polyurethaneurea blends; preparation of polyurethane elastomeric fibers for fabrics and swimwear)

IT Polyurethane fibers  
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(polyurea-; preparation of polyurethane elastomeric fibers for fabrics and swimwear)

IT Synthetic polymeric fibers, uses  
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(polyurea-polyurethanes; preparation of polyurethane elastomeric fibers for fabrics and swimwear)

- IT Polyureas  
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(polyurethane-, fiber; preparation of polyurethane elastomeric fibers for fabrics and swimwear)
- IT Solid solutions  
Textiles  
(preparation of polyurethane elastomeric fibers for fabrics and swimwear)
- IT Polyurethane fibers  
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(preparation of polyurethane elastomeric fibers for fabrics and swimwear)
- IT Oxides (inorganic), uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(preparation of polyurethane elastomeric fibers for fabrics and swimwear)
- IT Polyamides, uses  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(preparation of polyurethane elastomeric fibers for fabrics and swimwear)
- IT Clothing  
(swimwear; preparation of polyurethane elastomeric fibers for fabrics and swimwear)
- IT 142754-10-7P, Diethylenetriamine-4,4'-diphenylmethane diisocyanate-ethylenediamine-polytetramethylene glycol block copolymer  
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(fiber, from polyurethaneurea-polyurethane blend;  
preparation of polyurethane elastomeric fibers for fabrics and swimwear)
- IT 61245-23-6P, 4,4'-Diphenylmethane diisocyanate-ethylene glycol-poly(tetramethylene glycol) block copolymer  
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(fiber, from polyurethaneurea-polyurethane blend;  
preparation of polyurethane elastomeric fibers for fabrics and swimwear)
- IT 32131-17-2, Polyhexamethylene adipamide, uses  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(fiber; preparation of polyurethane elastomeric fibers for fabrics and swimwear)
- IT 12072-90-1, Hydromagnesite  
RL: MOA (Modifier or additive use); USES (Uses)  
(mixture with huntite; preparation of polyurethane elastomeric fibers for fabrics and swimwear)
- IT 19569-21-2, Huntite

RL: MOA (Modifier or additive use); USES (Uses)  
 (mixture with hydromagnesite; preparation of polyurethane  
 elastomeric fibers for fabrics and swimwear)

IT 1314-13-2, Zinc oxide, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (optionally solid solution with MgO; preparation of polyurethane  
 elastomeric fibers for fabrics and swimwear)

IT 1309-42-8, Magnesium hydroxide 1344-28-1, Aluminum oxide, uses  
 12304-65-3, Hydrotalcite 20427-58-1, Zinc hydroxide  
 21645-51-2, Aluminum hydroxide, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (preparation of polyurethane elastomeric fibers for fabrics and  
 swimwear)

IT 1309-48-4, Magnesium oxide (MgO), uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (solid solution with ZnO; preparation of polyurethane elastomeric  
 fibers for fabrics and swimwear)

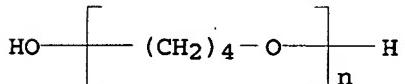
IT 142754-10-7P, Diethylenetriamine-4,4'-diphenylmethane  
 diisocyanate-ethylenediamine-polytetramethylene glycol block copolymer  
 RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical  
 process); POF (Polymer in formulation); PYP (Physical process); TEM  
 (Technical or engineered material use); PREP (Preparation); PROC  
 (Process); USES (Uses)  
 (fiber, from polyurethaneurea-polyurethane blend;  
 preparation of polyurethane elastomeric fibers for fabrics and  
 swimwear)

RN 142754-10-7 HCAPLUS

CN 1,2-Ethanediamine, N-(2-aminoethyl)-, polymer with 1,2-ethanediamine,  
 $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl) and  
 1,1'-methylenebis[4-isocyanatobenzene], block (9CI) (CA INDEX NAME)

CM 1

CRN 25190-06-1  
 CMF (C<sub>4</sub> H<sub>8</sub> O)<sub>n</sub> H<sub>2</sub>O  
 CCI PMS



CM 2

CRN 111-40-0  
 CMF C<sub>4</sub> H<sub>13</sub> N<sub>3</sub>



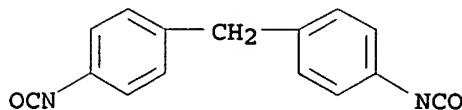
CM 3

CRN 107-15-3  
 CMF C<sub>2</sub> H<sub>8</sub> N<sub>2</sub>



CM 4

CRN 101-68-8  
 CMF C15 H10 N2 O2



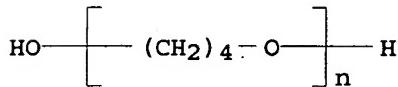
IT 61245-23-6P, 4,4'-Diphenylmethane diisocyanate-ethylene glycol-poly(tetramethylene glycol) block copolymer  
 RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
 (fiber, from polyurethaneurea-polyurethane blend;  
 preparation of polyurethane elastomeric fibers for fabrics and swimwear)

RN 61245-23-6 HCAPLUS

CN 1,2-Ethanediol, polymer with  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene], block (9CI) (CA INDEX NAME)

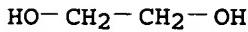
CM 1

CRN 25190-06-1  
 CMF (C4 H8 O)n H2 O  
 CCI PMS



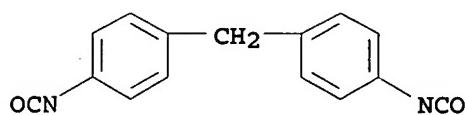
CM 2

CRN 107-21-1  
 CMF C2 H6 O2



CM 3

CRN 101-68-8  
 CMF C15 H10 N2 O2



IT 12304-65-3, Hydrotalcite

RL: MOA (Modifier or additive use); USES (Uses)  
(preparation of polyurethane elastomeric fibers for fabrics and swimwear)

RN 12304-65-3 HCPLUS

CN Hydrotalcite ( $Mg_6(CO_3)[Al(OH)_6]_2(OH)_4 \cdot 4H_2O$ ) (9CI) (CA INDEX NAME)

CM 1

CRN 11097-59-9

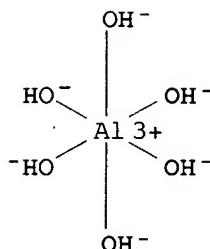
CMF C O3 . 2 Al H6 O6 . 4 H O . 6 Mg

CM 2

CRN 18893-33-9

CMF Al H6 O6

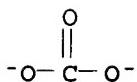
CCI CCS



CM 3

CRN 3812-32-6

CMF C O3



L21 ANSWER 25 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:35584 HCPLUS

DOCUMENT NUMBER: 136:87194

TITLE: Deodorants for textile products with good handle and washfastness

INVENTOR(S): Hashimoto, Hiromasa

PATENT ASSIGNEE(S): Nippon Zeon Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002011084	A2	20020115	JP 2000-196125	20000629
PRIORITY APPLN. INFO.:			JP 2000-196125	20000629
AB	The deodorants for socks, panty hoses, curtains, etc., contain hydrotalcites (preferably as 0.01-2 $\mu\text{m}$ -particles in dispersions), 2- or 3-valent metal oxides (preferably as 0.01-2 $\mu\text{m}$ -particles in dispersions), acrylic emulsions, and polysiloxanes. Thus, a nylon-polyurethane blend fabric was dipped in an aqueous mixture containing perchlorate-modified hydrotalcite, MgO, a Bu acrylate-Me methacrylate copolymer emulsion, and methoxy-terminated di-Me siloxane and dried to give a test fabric showing good deodorant properties after 10 washings.			
IC	ICM A61L009-01			
	ICS C08K003-22; C08K003-26; C08K003-38; C08L033-06; C08L083-04; D06M011-45; D06M015-263; D06M015-643			
CC	40-9 (Textiles and Fibers)			
ST	hydrotalcite deodorant fiber fabric finishing washfastness; metal oxide deodorant fiber fabric finishing; perchlorate modified hydrotalcite magnesia deodorant fabric; acrylic emulsion binder deodorant fiber fabric finishing; dimethyl siloxane deodorant fiber fabric finishing			
IT	Deodorants			
	Fabric finishing			
	Textiles			
	(deodorants for textiles with good handle and washfastness)			
IT	Polysiloxanes, uses			
	RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)			
	(deodorants for textiles with good handle and washfastness)			
IT	Oxides (inorganic), uses			
	RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)			
	(deodorants for textiles with good handle and washfastness)			
IT	Polyurethane fibers			
	RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)			
	(polyamide fiber blends; deodorants for textiles with good handle and washfastness)			
IT	Polyamide fibers, uses			
	RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)			
	(polyurethane fiber blends; deodorants for textiles with good handle and washfastness)			
IT	25852-37-3P, Butyl acrylate-methyl methacrylate copolymer			
	RL: PNU (Preparation, unclassified); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)			
	(deodorants for textiles with good handle and washfastness)			
IT	31900-57-9D, Dimethylsilanediol homopolymer, methoxy-terminated			
	32032-92-1, Dimethyl siloxane, methyl-terminated			
	RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)			
	(deodorants for textiles with good handle and washfastness)			
IT	1309-48-4, Magnesium oxide, uses 1314-13-2, Zinc oxide, uses			
	1344-28-1, Alumina, uses 12304-65-3, Hydrotalcite			
	12304-65-3D, Hydrotalcite, perchlorate-modified			
	RL: PRP (Properties); TEM (Technical or engineered material use); USES			

## (Uses)

(deodorants for textiles with good handle and washfastness)

IT 12304-65-3, Hydrotalcite 12304-65-3D, Hydrotalcite,  
perchlorate-modified  
RL: PRP (Properties); TEM (Technical or engineered material use); USES

## (Uses)

(deodorants for textiles with good handle and washfastness)

RN 12304-65-3 HCAPLUS

CN Hydrotalcite ( $Mg_6(CO_3)[Al(OH)_6]_2(OH)_4 \cdot 4H_2O$ ) (9CI) (CA INDEX NAME)

CM 1

CRN 11097-59-9

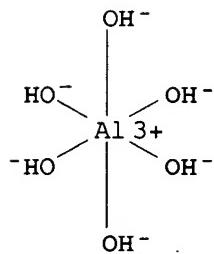
CMF C O3 . 2 Al H6 O6 . 4 H O . 6 Mg

CM 2

CRN 18893-33-9

CMF Al H6 O6

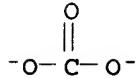
CCI CCS



CM 3

CRN 3812-32-6

CMF C O3



RN 12304-65-3 HCAPLUS

CN Hydrotalcite ( $Mg_6(CO_3)[Al(OH)_6]_2(OH)_4 \cdot 4H_2O$ ) (9CI) (CA INDEX NAME)

CM 1

CRN 11097-59-9

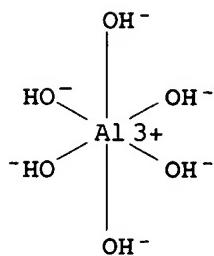
CMF C O3 . 2 Al H6 O6 . 4 H O . 6 Mg

CM 2

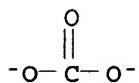
CRN 18893-33-9

CMF Al H6 O6

CCI CCS



CM 3

CRN 3812-32-6  
CMF C O3

L21 ANSWER 26 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2001:785866 HCPLUS  
 DOCUMENT NUMBER: 135:332500  
 TITLE: Hydrotalcite-containing deodorants and textile goods using them with soft touch and laundering resistance  
 INVENTOR(S): Hashimoto, Hiromasa  
 PATENT ASSIGNEE(S): Zeon Kasei Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 2001299886	A2	20011030	JP 2000-128121	20000427
PRIORITY APPLN. INFO.:				JP 2000-128121	20000427
AB	The textile goods are processed with deodorants containing hydrotalcites, acrylic emulsions, and organopolysiloxanes. Thus, nylon-polyurethane mixed-spun fabric was immersed in a deodorant composition containing perchlorate-introduced hydrotalcite 1, an aqueous emulsion of Bu acrylate-Me methacrylate copolymer (solid content 39%) 0.7, MeO-terminated di-Me siloxane 0.01, and H2O 128 parts and dried to give a test piece with good deodorant property and soft touch after laundering for 10 times.				
IC	ICM A61L009-01				
	ICS A41B009-00; A41B017-00; A61L009-16; D06M011-46; D06M015-263; D06M015-643; A61L002-16				
CC	40-9 (Textiles and Fibers)				
ST	hydrotalcite acrylic emulsion siloxane deodorant textile; nylon polyurethane mixed fabric deodorant				
IT	Polyurethane fibers				
	RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (biconstituent with nylon fibers, fabric; hydrotalcite-containing deodorants and textile goods using them with soft touch and laundering				

resistance)

- IT Polyamide fibers, uses  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (biconstituent with polyurethane fiber, fabric;  
 hydrotalcite-containing deodorants and textile goods using them with soft touch and laundering resistance)
- IT Polyester fibers, uses  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (fabrics; hydrotalcite-containing deodorants and textile goods using them with soft touch and laundering resistance)
- IT Polysiloxanes, uses  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (hydrotalcite-containing deodorants and textile goods using them with soft touch and laundering resistance)
- IT 25852-37-3P, Butyl acrylate-methyl methacrylate copolymer 31900-57-9DP,  
 Dimethylsilanediol homopolymer, dimethylmethoxysilyl-terminated  
 192518-56-2P  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (hydrotalcite-containing deodorants and textile goods using them with soft touch and laundering resistance)
- IT 12304-65-3D, Hydrotalcite, perchlorate-introduced  
 RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)  
 (hydrotalcite-containing deodorants and textile goods using them with soft touch and laundering resistance)
- IT 12304-65-3D, Hydrotalcite, perchlorate-introduced  
 RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)  
 (hydrotalcite-containing deodorants and textile goods using them with soft touch and laundering resistance)
- RN 12304-65-3 HCPLUS
- CN Hydrotalcite ( $Mg_6(CO_3)[Al(OH)_6]_2(OH)_4 \cdot 4H_2O$ ) (9CI) (CA INDEX NAME)

CM 1

CRN 11097-59-9

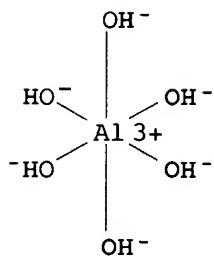
CMF C O3 . 2 Al H6 O6 . 4 H O . 6 Mg

CM 2

CRN 18893-33-9

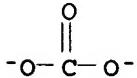
CMF Al H6 O6

CCI CCS



CM 3

CRN 3812-32-6  
CMF C O3



L21 ANSWER 27 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2001:763527 HCAPLUS  
DOCUMENT NUMBER: 135:305129  
TITLE: Dispersant slurries for making spandex  
INVENTOR(S): Carney, Thomas E.; Gutsche, Oliver; Schubert, Kai-volker  
PATENT ASSIGNEE(S): E. I. Du Pont de Nemours & Co., USA  
SOURCE: U.S. Pat. Appl. Publ., 12 pp., Cont.-in-part of U.S.  
Ser. No. 525,243, abandoned.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2001031791	A1	20011018	US 2001-801136	20010307
US 6531514	B2	20030311		
WO 2001068959	A1	20010920	WO 2001-US8022	20010313
W: BR, CN, JP, KR RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
EP 1264015	A1	20021211	EP 2001-916618	20010313
EP 1264015	B1	20050803		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
BR 2001009367	A	20030204	BR 2001-9367	20010313
JP 2003527476	T2	20030916	JP 2001-567834	20010313
US 2003149116	A1	20030807	US 2003-337034	20030106
US 6716523	B2	20040406		
HK 1055450	A1	20060203	HK 2003-107772	20031028
PRIORITY APPLN. INFO.:			US 2000-525243	B2 20000315
			US 2001-801136	A 20010307
			WO 2001-US8022	W 20010313

AB A dispersant slurry consists essentially of: (A) 10-78%, based on the total weight of the dispersant slurry, of an inorg. particulate; (B) 2-50%, based on the inorg. particulate, of a dispersant soluble in the liquid of component (C) selected from the group consisting of (i) phosphated block poly(alkylsiloxane)poly(alkylene ether) alcs.; and (ii) aromatic- or alkylarom.-terminated phosphated poly(alkylene ether) alcs.; and (C) a liquid selected from the group consisting of dimethylsulfoxide, tetramethylurea, and amides.

IC ICM B01F003-00

INCL 516009000

CC 40-2 (Textiles and Fibers)

ST phosphated dispersant slurry spandex

IT Alcohols, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(alkoxylated, aromatic- or alkylarom.-terminated, phosphated; dispersant slurries for making spandex)

IT Polysiloxanes, uses  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (di-Me, 3-hydroxypropyl Me, ethers with polyethylene glycol dihydrogen phosphate; dispersant slurries for making spandex)

IT Dispersing agents  
 (dispersant slurries for making spandex)

IT Amides, uses  
 Spandex fibers  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (dispersant slurries for making spandex)

IT Polyoxyalkylenes, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (mono(alkyl group)-terminated, aromatic- or alkylarom.-terminated, phosphated; dispersant slurries for making spandex)

IT Polysiloxanes, uses  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (polyether-, phosphates; dispersant slurries for making spandex)

IT Polysiloxanes, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (polyoxyalkylene-, block, phosphated; dispersant slurries for making spandex)

IT Polyoxyalkylenes, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (polysiloxane-, block, phosphated; dispersant slurries for making spandex)

IT Polyethers, uses  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (polysiloxane-, phosphates; dispersant slurries for making spandex)

IT 39464-70-5 51811-79-1 90093-37-1, Soprophor 3D-33 167290-82-6,  
 Findet OJP-5 361455-75-6, Chemphos TC-227  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (dispersant slurries for making spandex)

IT 67-68-5, Dimethylsulfoxide, uses 68-12-2, Dimethyl formamide, uses 127-19-5, Dimethyl acetamide 632-22-4, Tetramethylurea 872-50-4, N-Methylpyrrolidone, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (dispersant slurries for making spandex)

IT 121510-46-1  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (fiber; dispersant slurries for making spandex)

IT 471-34-1, Calcium carbonate, uses 513-77-9, Barium carbonate 546-93-0, Magnesium carbonate 1309-48-4, Magnesium oxide, uses 1314-13-2, Zinc oxide, uses 1344-28-1, Aluminum oxide, uses 7727-43-7, Barium sulfate 7778-18-9, Calcium sulfate 12072-90-1, Hydromagnesite 12304-65-3, Hydrotalcite 13463-67-7, Titanium dioxide, uses 19569-21-2, Huntite  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (particles; dispersant slurries for making spandex)

IT 121510-46-1  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (fiber; dispersant slurries for making spandex)

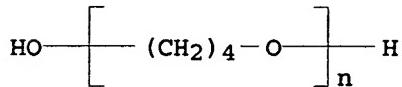
RN 121510-46-1 HCAPLUS

CN 1,3-Cyclohexanediamine, polymer with 1,2-ethanediamine,

$\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl) and  
1,1'-methylenebis[4-isocyanatobenzene], block (9CI) (CA INDEX NAME)

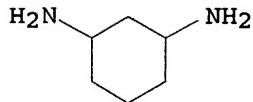
CM 1

CRN 25190-06-1  
CMF (C<sub>4</sub> H<sub>8</sub> O)<sub>n</sub> H<sub>2</sub> O  
CCI PMS



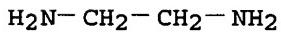
CM 2

CRN 3385-21-5  
CMF C<sub>6</sub> H<sub>14</sub> N<sub>2</sub>



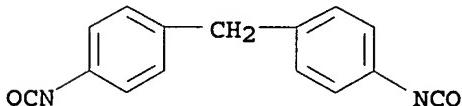
CM 3

CRN 107-15-3  
CMF C<sub>2</sub> H<sub>8</sub> N<sub>2</sub>



CM 4

CRN 101-68-8  
CMF C<sub>15</sub> H<sub>10</sub> N<sub>2</sub> O<sub>2</sub>



IT 12304-65-3, Hydrotalcite

RL: TEM (Technical or engineered material use); USES (Uses)  
(particles; dispersant slurries for making spandex)

RN 12304-65-3 HCAPLUS

CN Hydrotalcite (Mg<sub>6</sub>(CO<sub>3</sub>)<sub>2</sub>(OH)<sub>4</sub>.4H<sub>2</sub>O) (9CI) (CA INDEX NAME)

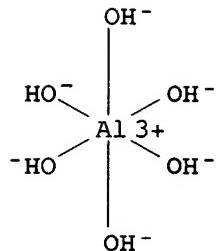
CM 1

CRN 11097-59-9

CMF C O3 . 2 Al H6 O6 . 4 H O . 6 Mg

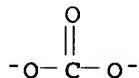
CM 2

CRN 18893-33-9  
 CMF Al H6 O6  
 CCI CCS



CM 3

CRN 3812-32-6  
 CMF C O3



L21 ANSWER 28 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2000:699352 HCPLUS  
 DOCUMENT NUMBER: 133:239280  
 TITLE: Manufacture of polyurethane elastic fibers having discoloration resistance  
 INVENTOR(S): Seo, Seung-won; Hwang, Yun-un; Kim, Moon-sun  
 PATENT ASSIGNEE(S): Tong Yang Nylon Co., Ltd., S. Korea  
 SOURCE: Repub. Korea, No pp. given  
 CODEN: KRXXFC  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Korean  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
KR 124963	B1	19971215	KR 1993-28704	19931221
PRIORITY APPLN. INFO.: KR 1993-28704 19931221				
AB	Chloride-resistant fibers are prepared by synthesizing long-chain polymers containing $\geq 85\%$ polyurethane segments in organic solvents, adding 0.01-10.0% Ba thiosulfate (vs. polyurethanes) and 0.01-10.0% basic aluminum magnesium carbonate hydrate, and dry-spinning the solution through an orifice to form filaments.			
IC	ICM D01F001-10 ICS D01F006-70			
CC	40-2 (Textiles and Fibers)			
ST	discoloration chloride resistance polyurethane elastic fiber;			

barium thiosulfate polyurethane elastic fiber; aluminum magnesium carbonate polyurethane fiber

IT Discoloration prevention  
Elastic materials  
(barium thiosulfate and basic aluminum magnesium carbonate hydrate in manufacture of polyurethane elastic fibers having chloride and discoloration resistance)

IT Polyurethane fibers  
Spandex fibers  
Synthetic fibers  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(barium thiosulfate and basic aluminum magnesium carbonate hydrate in manufacture of polyurethane elastic fibers having chloride and discoloration resistance)

IT Chlorides, properties  
RL: PRP (Properties)  
(barium thiosulfate and basic aluminum magnesium carbonate hydrate in manufacture of polyurethane elastic fibers having chloride and discoloration resistance)

IT 35112-53-9, Barium thiosulfate 135752-28-2, Aluminum magnesium carbonate hydroxide  
RL: MOA (Modifier or additive use); USES (Uses)  
(barium thiosulfate and basic aluminum magnesium carbonate hydrate in manufacture of polyurethane elastic fibers having chloride and discoloration resistance)

IT 135752-28-2, Aluminum magnesium carbonate hydroxide  
RL: MOA (Modifier or additive use); USES (Uses)  
(barium thiosulfate and basic aluminum magnesium carbonate hydrate in manufacture of polyurethane elastic fibers having chloride and discoloration resistance)

RN 135752-28-2 HCPLUS  
CN Aluminum magnesium carbonate hydroxide (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
HO	x	14280-30-9
Mg	x	7439-95-4
Al	x	7429-90-5
CO <sub>3</sub>	x	3812-32-6

L21 ANSWER 29 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2000:611574 HCPLUS  
 DOCUMENT NUMBER: 133:194293  
 TITLE: Heat-bondable marking sheets for dyed fabrics  
 INVENTOR(S): Hayashi, Toru  
 PATENT ASSIGNEE(S): Bando Chemical Industries, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000238190	A2	20000905	JP 1999-41626	19990219
PRIORITY APPLN. INFO.:			JP 1999-41626	19990219

AB The marking sheets with good resistance to dye migration from dyed fabrics, useful for sportswear, consist of a substrate, a color layer, a barrier layer, and an adhesive layer in this order, where the adhesive layer is composed of a hot-melt adhesive having m.p. lower than that of the color layer and the barrier layer, the substrate is peelable from the color layer, and the barrier layer contains substances preventing migration of dyes from the fabric to the color layer. Thus, a PET film was coated with a TiO<sub>2</sub>-containing thermoplastic polyurethane, laminated with Resamine ME 2825LP (thermoplastic polyurethane) containing 20 phr Kyowaad 200 [special Al(OH)<sub>3</sub>], and further laminated with a thermoplastic polyurethane hot-melt adhesive layer to give a marking sheet, which was laminated with a single-color polyester fabric and hot-pressed to give a sample showing little discoloration of the color layer.

IC ICM B32B027-00

CC 38-3 (Plastics Fabrication and Uses)  
Section cross-reference(s): 40

ST dye antimigration marking sheet aluminum hydroxide; thermoplastic polyurethane marking sheet fabric

IT Polyester fibers, miscellaneous  
RL: MSC (Miscellaneous)  
(fabrics; heat-bondable marking sheets for dyed fabrics preventing dye migration)

IT Adhesive films  
Marking  
(heat-bondable marking sheets for dyed fabrics preventing dye migration)

IT Polyesters, uses  
Polyesters, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(heat-bondable marking sheets for dyed fabrics preventing dye migration)

IT Polyurethanes, uses  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(thermoplastic; heat-bondable marking sheets for dyed fabrics preventing dye migration)

IT 1344-28-1, Kyowaad 200, uses 11097-59-9, Kyowaad 500  
RL: MOA (Modifier or additive use); USES (Uses)  
(barrier layer containing; heat-bondable marking sheets for dyed fabrics preventing dye migration)

IT 224566-22-7, Resamine ME 2825LP  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(heat-bondable marking sheets for dyed fabrics preventing dye migration)

IT 25038-59-9, Poly(ethylene terephthalate), uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(heat-bondable marking sheets for dyed fabrics preventing dye migration)

IT 13463-67-7, Titanium dioxide, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(pigments; heat-bondable marking sheets for dyed fabrics preventing dye migration)

IT 11097-59-9, Kyowaad 500  
RL: MOA (Modifier or additive use); USES (Uses)  
(barrier layer containing; heat-bondable marking sheets for dyed fabrics preventing dye migration)

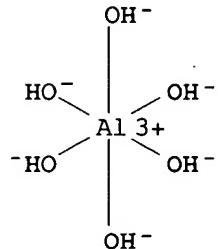
RN 11097-59-9 HCAPLUS

CN Aluminate (Al(OH)<sub>63-</sub>), (OC-6-11)-, magnesium carbonate hydroxide (2:6:1:4)

(9CI) (CA INDEX NAME)

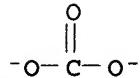
CM 1

CRN 18893-33-9  
 CMF Al H6 O6  
 CCI CCS



CM 2

CRN 3812-32-6  
 CMF C O3



L21 ANSWER 30 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2000:314763 HCPLUS  
 DOCUMENT NUMBER: 132:309244  
 TITLE: phosphate ester-surface treated hydrotalcite  
 inhibitors against deterioration by chlorine for  
 polyurethane compositions  
 INVENTOR(S): Takahata, Harumi; Katsuki, Keiko  
 PATENT ASSIGNEE(S): Kyowa Chemical Industry Co., Ltd., Japan  
 SOURCE: PCT Int. Appl., 19 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000026289	A1	20000511	WO 1999-JP6005	19991029
W: US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
JP 2000198979	A2	20000718	JP 1999-306312	19991028
EP 1046672	A1	20001025	EP 1999-951142	19991029
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRIORITY APPLN. INFO.:			JP 1998-326170	A 19981030
			WO 1999-JP6005	W 19991029

OTHER SOURCE(S): MARPAT 132:309244

AB The inhibitor is prepared by surface-treating a hydrotalcite compound [e.g., Mg<sub>4.5</sub>Al<sub>2</sub>(OH)<sub>13</sub>CO<sub>3.3.5</sub>H<sub>2</sub>O] with a phosphoric acid ester or its salt of dialcoholamine or alkali metal (RO)<sub>n</sub>P(=O)[OH.NH(R'OH)<sub>2</sub>]<sub>3-n</sub>, or (RO)<sub>n</sub>P(=O)(OM)<sub>3-n</sub> (R =C<sub>10-30</sub> alkyl or alkenyl; R' = C<sub>1-6</sub> alkylene; n = 1-2; and M = H, alkali metal; e.g., distearyl phosphate sodium salt).

IC ICM C08K009-04  
ICS C08L075-04

CC 37-6 (Plastics Manufacture and Processing)  
Section cross-reference(s): 38, 40

ST polyurethane fiber inhibitor chlorine deterioration; phosphate ester surface treated hydrotalcite inhibitor

IT Minerals, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(hydrotalcite-group, inhibitors; phosphate ester-surface treated hydrotalcite inhibitors against deterioration by chlorine for polyurethane compns.)

IT Polyurethane fibers  
Polyurethanes, preparation  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (phosphate ester-surface treated hydrotalcite inhibitors against deterioration by chlorine for polyurethane compns.)

IT 9053-66-1P, Ethylenediamine-MDI-poly(tetramethylene glycol) copolymer  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (fiber; phosphate ester-surface treated hydrotalcite inhibitors against deterioration by chlorine for polyurethane compns.)

IT 173550-85-1 192728-64-6, Aluminum magnesium carbonate hydroxide (Al<sub>2</sub>Mg<sub>4.5</sub>(CO<sub>3</sub>)(OH)<sub>13</sub>), hydrate (2:7) 265990-13-4  
RL: MOA (Modifier or additive use); USES (Uses)  
(inhibitors; phosphate ester-surface treated hydrotalcite inhibitors against deterioration by chlorine for polyurethane compns.)

IT 265990-15-6  
RL: MOA (Modifier or additive use); USES (Uses)  
(phosphate ester-surface treated hydrotalcite inhibitors against deterioration by chlorine for polyurethane compns.)

IT 2958-14-7  
RL: MOA (Modifier or additive use); USES (Uses)  
(surface-treating agent; phosphate ester-surface treated hydrotalcite inhibitors against deterioration by chlorine for polyurethane compns.)

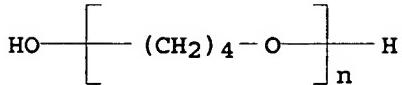
IT 7664-38-2D, Phosphoric acid, esters, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(surface-treating agents; phosphate ester-surface treated hydrotalcite inhibitors against deterioration by chlorine for polyurethane compns.)

IT 9053-66-1P, Ethylenediamine-MDI-poly(tetramethylene glycol) copolymer  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (fiber; phosphate ester-surface treated hydrotalcite inhibitors against deterioration by chlorine for polyurethane compns.)

RN 9053-66-1 HCPLUS

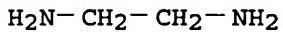
CN 1,2-Ethanediamine, polymer with  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX NAME)

CRN 25190-06-1  
 CMF (C<sub>4</sub> H<sub>8</sub> O)<sub>n</sub> H<sub>2</sub> O  
 CCI PMS



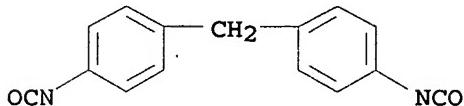
CM 2

CRN 107-15-3  
 CMF C<sub>2</sub> H<sub>8</sub> N<sub>2</sub>



CM 3

CRN 101-68-8  
 CMF C<sub>15</sub> H<sub>10</sub> N<sub>2</sub> O<sub>2</sub>



IT 265990-13-4

RL: MOA (Modifier or additive use); USES (Uses)  
 (inhibitors; phosphate ester-surface treated hydrotalcite inhibitors  
 against deterioration by chlorine for polyurethane compns.)

RN 265990-13-4 HCPLUS

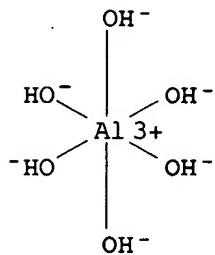
CN Aluminate (Al(OH)<sub>63-</sub>), (OC-6-11)-, magnesium zinc carbonate (2:3:1:1),  
 dihydrate (9CI) (CA INDEX NAME)

CM 1

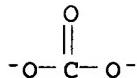
CRN 119758-00-8  
 CMF C O<sub>3</sub> . 2 Al H<sub>6</sub> O<sub>6</sub> . 3 Mg . Zn

CM 2

CRN 18893-33-9  
 CMF Al H<sub>6</sub> O<sub>6</sub>  
 CCI CCS



CM 3

CRN 3812-32-6  
CMF C O3

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 31 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2000:272034 HCAPLUS  
 DOCUMENT NUMBER: 132:294596  
 TITLE: Polyurethane compositions with good dyeability and dyeability modifiers therefor  
 INVENTOR(S): Miyata, Shigeo  
 PATENT ASSIGNEE(S): Kaisui Kagaku Kenkyusho K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000119510	A2	20000425	JP 1998-327422	19981012
JP 3671191	B2	20050713		

PRIORITY APPLN. INFO.: JP 1998-327422 19981012  
 AB Title compns. contain 0.1-20 phr hydrotalcites  $M_{2+1-x}M_{3+x}(OH)_{2An-x}/m.mH_2O$  ( $M_{2+}$  = divalent metal, e.g. Zn, Mg;  $M_{3+}$  = trivalent metal, e.g., Al;  $An^-$  = mono- or divalent anion, e.g.,  $NO_3^-$ ,  $Cl^-$ ,  $Br^-$ ,  $ClO_4^-$ ,  $HCOO^-$ ,  $CH_3COO^-$ ,  $SO_4^{2-}$ ;  $x > 0$  and  $< 0.5$ ,  $m \geq 0$  and  $< 2$ ;  $x/n = 20-30\%$ ). The above compns. could be made into polyurethane fibers, which could be blended with nylon fibers to improve the dyeability of nylon fibers. A solution containing ethylenediamine-MDI-PTMG copolymer, additives, and 2%  $NO_3^-$ -type DHT 4 was made into a film with excellent dyeability.  
 IC ICM C08L075-04  
 ICS C01F007-00; C01F007-76; C01G009-00; C08K003-20; D06P001-39  
 CC 37-6 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 40  
 ST modified hydrotalcite dyeability improver polyurethane; nylon fiber dyeability improvement polyurethane modified hydrotalcite

comprn  
IT Polyurethanes, preparation  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (modified hydrotalcite-containing polyurethane compns. with high dyeability for nylon fiber composites)

IT Polyamide fibers; uses  
Polyurethane fibers  
RL: TEM (Technical or engineered material use); USES (Uses) (modified hydrotalcite-containing polyurethane compns. with high dyeability for nylon fiber composites)

IT 64-19-7DP, Acetic acid, aluminum zinc carbonate hydroxide compound, preparation 7429-90-5DP, Aluminum, zinc acetate carbonate hydroxide compound, preparation 7440-66-6DP, Zinc, aluminum acetate carbonate hydroxide compound, preparation 264872-05-1P 264872-06-2P, Aluminum magnesium chloride hydroxide ( $\text{Al}_{0.33}\text{Mg}_{0.67}\text{Cl}_{0.32}(\text{OH})_2$ ) 264872-07-3P 264872-08-4P  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses) (modified hydrotalcite-containing polyurethane compns. with high dyeability for nylon fiber composites)

IT 9053-66-1P, Ethylenediamine-MDI-PTMG copolymer  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (modified hydrotalcite-containing polyurethane compns. with high dyeability for nylon fiber composites)

IT 127-09-3, Sodium acetate 7601-90-3, Perchloric acid, reactions 7646-85-7, Zinc chloride, reactions 7647-01-0, Hydrogen chloride, reactions 7697-37-2, Nitric acid, reactions 10035-10-6, Hydrogen bromide, reactions 69048-27-7, DHT 4  
RL: RCT (Reactant); RACT (Reactant or reagent) (modified hydrotalcite-containing polyurethane compns. with high dyeability for nylon fiber composites)

IT 264872-05-1P 264872-06-2P, Aluminum magnesium chloride hydroxide ( $\text{Al}_{0.33}\text{Mg}_{0.67}\text{Cl}_{0.32}(\text{OH})_2$ ) 264872-07-3P 264872-08-4P  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses) (modified hydrotalcite-containing polyurethane compns. with high dyeability for nylon fiber composites)

RN 264872-05-1 HCPLUS  
CN Aluminum magnesium carbonate hydroxide nitrate ( $\text{Al}_{0.33}\text{Mg}_{0.67}(\text{CO}_3)_{0.01}(\text{OH})_2(\text{NO}_3)_{0.31}$ ) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
NO <sub>3</sub>	0.31	14797-55-8
HO	2	14280-30-9
Mg	0.67	7439-95-4
Al	0.33	7429-90-5
CO <sub>3</sub>	0.01	3812-32-6

RN 264872-06-2 HCPLUS  
CN Aluminum magnesium chloride hydroxide ( $\text{Al}_{0.33}\text{Mg}_{0.67}\text{Cl}_{0.32}(\text{OH})_2$ ) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number

Cl	0.32	22537-15-1
HO	2	14280-30-9
Mg	0.67	7439-95-4
Al	0.33	7429-90-5

RN 264872-07-3 HCAPLUS

CN Aluminum magnesium bromide carbonate hydroxide  
(Al0.33Mg0.67Br0.31(CO3)0.01(OH)2) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
HO	2	14280-30-9
Br	0.31	10097-32-2
Mg	0.67	7439-95-4
Al	0.33	7429-90-5
CO3	0.01	3812-32-6

RN 264872-08-4 HCAPLUS

CN Aluminum magnesium carbonate hydroxide perchlorate  
(Al0.33Mg0.67(CO3)0.02(OH)2(ClO4)0.3) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
ClO4	0.3	14797-73-0
HO	2	14280-30-9
Mg	0.67	7439-95-4
Al	0.33	7429-90-5
CO3	0.02	3812-32-6

IT 9053-66-1P, Ethylenediamine-MDI-PTMG copolymer

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(modified hydrotalcite-containing polyurethane compns. with high  
dyeability for nylon fiber composites)

RN 9053-66-1 HCAPLUS

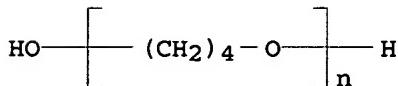
CN 1,2-Ethanediamine, polymer with  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-  
butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX  
NAME)

CM 1

CRN 25190-06-1

CMF (C4 H8 O)n H2 O

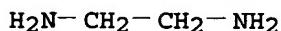
CCI PMS



CM 2

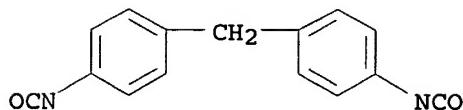
CRN 107-15-3

CMF C2 H8 N2



CM 3

CRN 101-68-8  
 CMF C15 H10 N2 O2



IT 69048-27-7, DHT 4

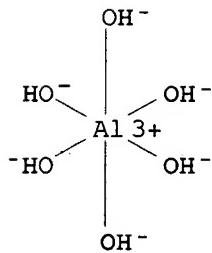
RL: RCT (Reactant); RACT (Reactant or reagent)  
 (modified hydrotalcite-containing polyurethane compns. with high  
 dyeability for nylon fiber composites)

RN 69048-27-7 HCPLUS

CN Aluminate (Al(OH)63-) , (OC-6-11)-, magnesium carbonate (2:4:1) (9CI) (CA  
INDEX NAME)

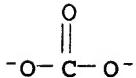
CM 1

CRN 18893-33-9  
 CMF Al H6 O6  
 CCI CCS



CM 2

CRN 3812-32-6  
 CMF C O3



L21 ANSWER 32 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:531504 HCPLUS

DOCUMENT NUMBER: 131:186175

TITLE: Polyurethane elastic fibers and cloths  
thereof

INVENTOR(S): Yoshizato, Akihiko; Minari, Yasushi  
 PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11229277	A2	19990824	JP 1998-46401	19980213
PRIORITY APPLN. INFO.:			JP 1998-46401	19980213

OTHER SOURCE(S): MARPAT 131:186175

- AB Chlorine-resistant fibers contain 0.1-10 parts (per 100 parts polyurethane) oxides, complex oxides, hydroxides of Mg, Zn, and Al, and hydrotalcites and are treated with 100 parts 100:0-50:50 mixts. of polyalkylsiloxanes with mineral oils containing 0.01-10 parts phosphate esters such as stearyl acid phosphate (I). Thus, 4,4'-diphenylmethane diisocyanate-polytetramethylene glycol-ethylenediamine block copolymer fibers containing 4%  $3\text{ZnO}\cdot\text{ZnAl}_2\text{O}_4$  and stabilizers were prepared and treated with an oil containing dimethylsiloxane 98, a mineral oil 1.5, and I (Phoslex A 18) 0.5 part.
- IC ICM D06M015-643  
 ICS D01F001-10; D01F006-94; D03D015-00; D03D015-08; D06M013-292;  
 D01F006-70; D06M101-38
- CC 40-7 (Textiles and Fibers)
- ST polyurethane elastic fiber chlorine resistant; oiling agent  
 polyurethane elastic fiber; stearyl acid phosphate oiling agent fiber; methylsiloxane oiling agent fiber; mineral oil treatment elastic fiber
- IT Elastic materials  
 Lubricants  
 (chlorine-resistant polyurethane elastic fibers containing metal compds. and treated with polyalkylsiloxanes containing mineral oils and phosphate esters)
- IT Spandex fibers  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (chlorine-resistant polyurethane elastic fibers containing metal compds. and treated with polyalkylsiloxanes containing mineral oils and phosphate esters)
- IT Hydrocarbon oils  
 Hydroxides (inorganic)  
 Oxides (inorganic), uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (chlorine-resistant polyurethane elastic fibers containing metal compds. and treated with polyalkylsiloxanes containing mineral oils and phosphate esters)
- IT 1309-48-4, Magnesium oxide, uses 1314-13-2, Zinc oxide, uses 1623-24-1, Isopropyl acid phosphate 2958-09-0, Monostearyl acid phosphate 3037-89-6, Distearyl phosphate 5116-94-9, Monotridecyl phosphate 9016-00-6, Poly[oxy(dimethylsilylene)] 12304-65-3, Hydrotalcite 24599-21-1, 2-Hydroxyethyl methacrylate acid phosphate 31800-88-1, Polyethylene glycol octyl ether acid phosphate 31900-57-9, Poly(dimethylsilanediol) 90093-10-0, Phoslex A 18 153977-21-0, Aluminum zinc oxide (Al<sub>2</sub>Zn4O<sub>7</sub>) 192728-64-6  
 RL: MOA (Modifier or additive use); USES (Uses)

(chlorine-resistant polyurethane elastic fibers containing metal compds. and treated with polyalkylsiloxanes containing mineral oils and phosphate esters)

IT 7782-50-5, Chlorine, miscellaneous  
RL: MSC (Miscellaneous)

(chlorine-resistant polyurethane elastic fibers containing metal compds. and treated with polyalkylsiloxanes containing mineral oils and phosphate esters)

IT 107375-35-9P, 4,4'-Diphenylmethane diisocyanate-ethylenediamine-polytetramethylene glycol block copolymer  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(fibers; chlorine-resistant polyurethane elastic fibers containing metal compds. and treated with polyalkylsiloxanes containing mineral oils and phosphate esters)

IT 12304-65-3, Hydrotalcite  
RL: MOA (Modifier or additive use); USES (Uses)

(chlorine-resistant polyurethane elastic fibers containing metal compds. and treated with polyalkylsiloxanes containing mineral oils and phosphate esters)

RN 12304-65-3 HCAPLUS

CN Hydrotalcite ( $Mg_6(CO_3)[Al(OH)_6]_2(OH)_4 \cdot 4H_2O$ ) (9CI) (CA INDEX NAME)

CM 1

CRN 11097-59-9

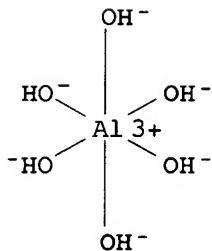
CMF C O3 . 2 Al H6 O6 . 4 H O . 6 Mg

CM 2

CRN 18893-33-9

CMF Al H6 O6

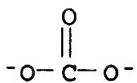
CCI CCS



CM 3

CRN 3812-32-6

CMF C O3



IT 107375-35-9P, 4,4'-Diphenylmethane diisocyanate-ethylenediamine-polytetramethylene glycol block copolymer  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (fibers; chlorine-resistant polyurethane elastic fibers containing metal compds. and treated with polyalkylsiloxanes containing mineral oils and phosphate esters)

RN 107375-35-9 HCPLUS

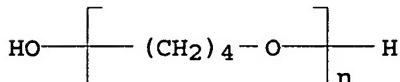
CN 1,2-Ethanediamine, polymer with  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene], block (9CI) (CA INDEX NAME)

CM 1

CRN 25190-06-1

CMF (C4 H8 O)n H2 O

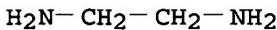
CCI PMS



CM 2

CRN 107-15-3

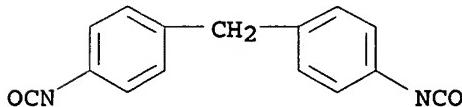
CMF C2 H8 N2



CM 3

CRN 101-68-8

CMF C15 H10 N2 O2



L21 ANSWER 33 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:531500 HCPLUS

DOCUMENT NUMBER: 131:186167

TITLE: Union cloths and manufacturing methods therefor

INVENTOR(S): Miyake, Yasufumi; Minari, Yasushi; Yoshisato, Akihiko

PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11229272	A2	19990824	JP 1998-46399	19980213
PRIORITY APPLN. INFO.:			JP 1998-46399	19980213
OTHER SOURCE(S):	MARPAT 131:186167			
AB	Polyurethane elastic fibers containing 0.1-10.0% oxides, composite oxides, and hydroxides of Mg, Zn, Al and hydrotalcites are used to prepare union cloths with polyamide and/or polyester fibers, and the union cloths are treated with phosphate esters. Thus, 4,4'-diphenylmethane diisocyanate-ethylenediamine-polytetramethylene glycol block copolymer fibers containing stabilizers and 4.5% 3ZnO.ZnAl2O4 (a Cl deterioration inhibitor) were prepared and used to prepare a tricot union cloth with nylon 66 fibers, and the cloth was dyed and treated with stearyl acid phosphate.			
IC	ICM D06M013-292			
	ICS D03D015-00; D01F001-10; D01F006-96			
CC	40-5 (Textiles and Fibers)			
ST	chlorine resistant polyurethane elastic fiber; polyamide polyurethane fiber union cloth; polyester polyurethane fiber union cloth; aluminum zinc magnesium oxide polyurethane fiber			
IT	Elastic materials (chlorine-resistant polyurethane elastic fibers containing metal oxides and hydroxides and hydrotalcites and polyamide and polyester fibers for union cloths)			
IT	Spandex fibers RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (chlorine-resistant polyurethane elastic fibers containing metal oxides and hydroxides and hydrotalcites and polyamide and polyester fibers for union cloths)			
IT	Hydroxides (inorganic) Oxides (inorganic), uses RL: MOA (Modifier or additive use); USES (Uses) (chlorine-resistant polyurethane elastic fibers containing metal oxides and hydroxides and hydrotalcites and polyamide and polyester fibers for union cloths)			
IT	Polyamide fibers, uses RL: TEM (Technical or engineered material use); USES (Uses) (chlorine-resistant polyurethane elastic fibers containing metal oxides and hydroxides and hydrotalcites and polyamide and polyester fibers for union cloths)			
IT	Polyester fibers, uses RL: TEM (Technical or engineered material use); USES (Uses) (chlorine-resistant polyurethane elastic fibers containing metal oxides and hydroxides and hydrotalcites and polyamide and polyester fibers for union cloths)			
IT	Polyamides, uses RL: TEM (Technical or engineered material use); USES (Uses) (fibers; chlorine-resistant polyurethane elastic fibers containing metal oxides and hydroxides and hydrotalcites and polyamide and polyester fibers for union cloths)			
IT	1309-48-4, Magnesium oxide, uses 1314-13-2, Zinc oxide, uses 2958-09-0, Stearyl acid phosphate 10054-29-2, Tetradecyl phosphate 12304-65-3, Hydrotalcite 153977-21-0, Aluminum zinc oxide (Al2Zn4O7) RL: MOA (Modifier or additive use); USES (Uses)			

(chlorine-resistant polyurethane elastic fibers containing metal oxides and hydroxides and hydrotalcites and polyamide and polyester fibers for union cloths)

IT 7782-50-5, Chlorine, miscellaneous  
 RL: MSC (Miscellaneous)  
 (chlorine-resistant polyurethane elastic fibers containing metal oxides and hydroxides and hydrotalcites and polyamide and polyester fibers for union cloths)

IT 107375-35-9P, 4,4'-Diphenylmethane diisocyanate-ethylenediamine-polytetramethylene glycol block copolymer  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (fibers; chlorine-resistant polyurethane elastic fibers containing metal oxides and hydroxides and hydrotalcites and polyamide and polyester fibers for union cloths)

IT 32131-17-2, Nylon 66, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (fibers; chlorine-resistant polyurethane elastic fibers containing metal oxides and hydroxides and hydrotalcites and polyamide and polyester fibers for union cloths)

IT 12304-65-3, Hydrotalcite  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (chlorine-resistant polyurethane elastic fibers containing metal oxides and hydroxides and hydrotalcites and polyamide and polyester fibers for union cloths)

RN 12304-65-3 HCPLUS  
 CN Hydrotalcite ( $Mg_6(CO_3)[Al(OH)_6]_2(OH)_4 \cdot 4H_2O$ ) (9CI) (CA INDEX NAME)

CM 1

CRN 11097-59-9

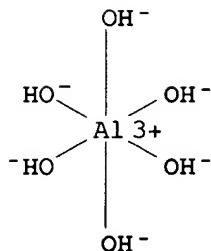
CMF C O3 . 2 Al H6 O6 . 4 H O . 6 Mg

CM 2

CRN 18893-33-9

CMF Al H6 O6

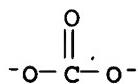
CCI CCS



CM 3

CRN 3812-32-6

CMF C O3



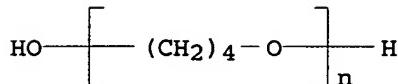
IT 107375-35-9P, 4,4'-Diphenylmethane diisocyanate-ethylenediamine-polytetramethylene glycol block copolymer  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (fibers; chlorine-resistant polyurethane elastic fibers containing metal oxides and hydroxides and hydrotalcites and polyamide and polyester fibers for union cloths)

RN 107375-35-9 HCPLUS

CN 1,2-Ethanediamine, polymer with  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene], block (9CI) (CA INDEX NAME)

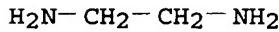
CM 1

CRN 25190-06-1  
 CMF (C<sub>4</sub> H<sub>8</sub> O)<sub>n</sub> H<sub>2</sub> O  
 CCI PMS



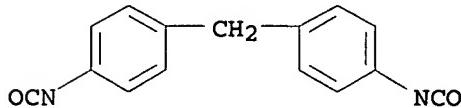
CM 2

CRN 107-15-3  
 CMF C<sub>2</sub> H<sub>8</sub> N<sub>2</sub>



CM 3

CRN 101-68-8  
 CMF C<sub>15</sub> H<sub>10</sub> N<sub>2</sub> O<sub>2</sub>



L21 ANSWER 34 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1999:209888 HCPLUS  
 DOCUMENT NUMBER: 130:268493  
 TITLE: Manufacture of dyed fabrics composed of elastomeric polyurethane fibers and polyamide fibers

INVENTOR(S) : Yamamoto, Taro; Doi, Masanori  
 PATENT ASSIGNEE(S) : Asahi Chemical Industry Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11081044	A2	19990326	JP 1997-238260	19970903
JP 3716893	B2	20051116		

PRIORITY APPLN. INFO.: JP 1997-238260 19970903

AB Fabrics composed of elastomeric polyurethane fibers and polyamide fibers are dyed with acid dyes then fixed with natural tannin to produce fabrics having good color fastness and durability to Cl-containing water, wherein the elastomeric polyurethane fibers are prepared from polyoxyalkylene diols (Mn 500-5000) containing 5-50 mol%  $(CH_2)_nCR_1R_2(CH_2)_mO$  ( $R_1 = C_{1-3}$  alkyl;  $R_2 = H, C_{1-3}$  alkyl;  $m, n = 1-3$ ) units, organic diisocyanates, and organic diamines, and contain 0.5-10.0% oxides, hydroxides, or hydrotalcites of metals selected from Mg, Zn, and Al. The fabrics are especially suitable for swimsuits. Thus, 400 g of a polyoxyalkylene diol (Mn 1800) containing butylene group and 10 mol% 2,2-dimethylpropylene group was heated with 80.5 g MDI at 80° to give a polyurethane prepolymer, which was dissolved in AcNMe<sub>2</sub>, then polymerized with 5.41 g ethylenediamine to give a polyurethane solution, which was mixed with 4,4'-butyldenebis(3-methyl-6-tert-butylphenol), 2-(2-hydroxy-3-tert-butyl-5-methylphenyl)-5-chlorobenzotriazole, and 3ZnO·ZnAl<sub>2</sub>O<sub>4</sub>, and spun to give fibers. A fabric composed of the fibers and poly(hexamethylene adipamide) fiber was dyed with an acid dye (Irgalan Black BGL), and fixed with tannin (Hifix SLA) to give a dyed fabric having excellent resistance to Cl-containing water.

IC ICM D01F006-70  
 ICS D03D015-00; D03D015-08; D04B021-18; D06P001-39; D06P003-82;  
 D06P005-00; D06P005-08; D06P003-24

CC 40-6 (Textiles and Fibers)

ST polyamide elastomeric polyurethane fiber blend fabric; dyed fabric polyamide polyurethane fiber blend; polyoxyalkylene polyurethane fiber; swimwear polyamide polyurethane fabric chlorine resistance; tannin fixed polyamide polyurethane dyed fabric; color fastness polyamide polyurethane dyed fabric; inorg metal elastomeric polyurethane fiber fabric

IT Tannins  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (Hifix SLA; manufacture of dyed and tannin-fixed polyamide-polyurethane fabrics with good color fastness and Cl resistance)

IT Polyamides, uses  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (fibers; manufacture of dyed and tannin-fixed polyamide-polyurethane fabrics with good color fastness and Cl resistance)

IT Textiles  
 (manufacture of dyed and tannin-fixed polyamide-polyurethane fabrics with good color fastness and Cl resistance)

IT Spandex fibers  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP

## (Preparation); USES (Uses)

(manufacture of dyed and tannin-fixed polyamide-polyurethane fabrics with good color fastness and Cl resistance)

IT Polyamide fibers, uses

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(manufacture of dyed and tannin-fixed polyamide-polyurethane fabrics with good color fastness and Cl resistance)

IT Sporting goods

(swimwear; manufacture of dyed and tannin-fixed polyamide-polyurethane fabrics with good color fastness and Cl resistance)

IT 186757-45-9P, Butylene glycol-ethylenediamine-MDI-neopentyl glycol

block copolymer 222055-65-4P, Butylene glycol-ethylenediamine-MDI-3-methylpentanediol block copolymer 222055-66-5P, Butylene glycol-ethylenediamine-MDI-neopentyl glycol-polytetramethylene glycol block copolymer

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(fibers; manufacture of dyed and tannin-fixed polyamide-polyurethane fabrics with good color fastness and Cl resistance)

IT 32131-17-2, Poly(hexamethylene adipamide), uses

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(fibers; manufacture of dyed and tannin-fixed polyamide-polyurethane fabrics with good color fastness and Cl resistance)

IT 1309-42-8, Magnesium hydroxide 1309-48-4, Magnesium oxide, uses

1314-13-2, Zinc oxide, uses 131494-77-4 153977-21-0, Aluminum zinc oxide (Al2Zn4O7)

RL: MOA (Modifier or additive use); USES (Uses)

(polyurethane fibers containing; manufacture of dyed and tannin-fixed polyamide-polyurethane fabrics with good color fastness and Cl resistance)

IT 186757-45-9P, Butylene glycol-ethylenediamine-MDI-neopentyl glycol

block copolymer 222055-65-4P, Butylene glycol-ethylenediamine-MDI-3-methylpentanediol block copolymer 222055-66-5P, Butylene glycol-ethylenediamine-MDI-neopentyl glycol-polytetramethylene glycol block copolymer

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(fibers; manufacture of dyed and tannin-fixed polyamide-polyurethane fabrics with good color fastness and Cl resistance)

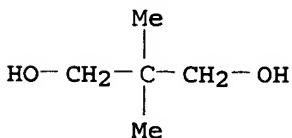
RN 186757-45-9 HCPLUS

CN 1,4-Butanediol, polymer with 2,2-dimethyl-1,3-propanediol, 1,2-ethanediamine and 1,1'-methylenebis[4-isocyanatobenzene], block (9CI) (CA INDEX NAME)

CM 1

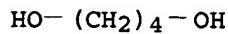
CRN 126-30-7

CMF C5 H12 O2



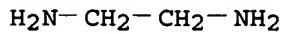
CM 2

CRN 110-63-4  
 CMF C4 H10 O2



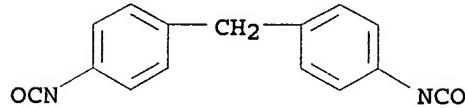
CM 3

CRN 107-15-3  
 CMF C2 H8 N2



CM 4

CRN 101-68-8  
 CMF C15 H10 N2 O2

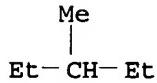


RN 222055-65-4 HCAPLUS

CN Butanediol, polymer with 1,2-ethanediamine, 1,1'-methylenebis[4-isocyanatobenzene] and 3-methylpentane dihydroxy deriv., block (9CI) (CA INDEX NAME)

CM 1

CRN 51617-68-6  
 CMF C6 H14 O2  
 CCI IDS



2 (D1-OH)

CM 2

CRN 25265-75-2  
 CMF C4 H10 O2  
 CCI IDS

H<sub>3</sub>C—CH<sub>2</sub>—CH<sub>2</sub>—CH<sub>3</sub>

2 ( D1—OH )

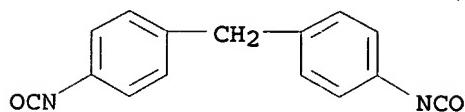
CM 3

CRN 107-15-3  
CMF C2 H8 N2

H<sub>2</sub>N—CH<sub>2</sub>—CH<sub>2</sub>—NH<sub>2</sub>

CM 4

CRN 101-68-8  
CMF C15 H10 N2 O2



RN 222055-66-5 HCAPLUS

CN Butanediol, polymer with 2,2-dimethyl-1,3-propanediol, 1,2-ethanediamine,  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene], block (9CI) (CA INDEX NAME)

CM 1

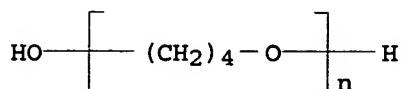
CRN 25265-75-2  
CMF C4 H10 O2  
CCI IDS

H<sub>3</sub>C—CH<sub>2</sub>—CH<sub>2</sub>—CH<sub>3</sub>

2 ( D1—OH )

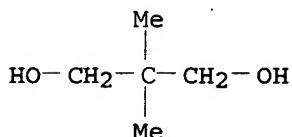
CM 2

CRN 25190-06-1  
CMF (C<sub>4</sub> H<sub>8</sub> O)<sub>n</sub> H<sub>2</sub> O  
CCI PMS



CM 3

CRN 126-30-7  
CMF C5 H12 O2



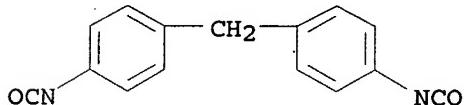
CM 4

CRN 107-15-3  
CMF C2 H8 N2

$$\text{H}_2\text{N}-\text{CH}_2-\text{CH}_2-\text{NH}_2$$

CM 5

CRN 101-68-8  
CMF C15 H10 N2 O2



IT 131494-77-4

RL: MOA (Modifier or additive use); USES (Uses)  
(polyurethane fibers containing; manufacture of dyed and tannin-fixed  
polyamide-polyurethane fabrics with good color fastness and  
Cl resistance)

RN 131494-77-4 HCAPLUS

CN Aluminate ( $\text{Al}(\text{OH})_{63-}$ ), ( $\text{OC}-6-11$ ) $_n$ , magnesium carbonate hydroxide (4:9:2:2), heptahydrate (9CI) (CA INDEX NAME)

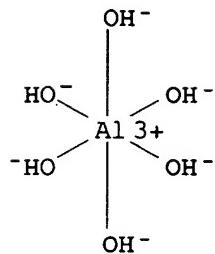
CM 1

CRN 98036-77-2  
CMF C 03 . 2 Al H6 06 . H O . 9/2 Mg

CM 2

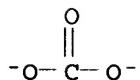
CRN 18893-33-9

CMF A1 H6 O6  
 CCI CCS



CM 3

CRN 3812-32-6  
 CMF C O3



L21 ANSWER 35 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1998:335060 HCPLUS  
 DOCUMENT NUMBER: 129:28727  
 TITLE: Hydrotalcite-type compound-containing polymer materials  
 INVENTOR(S): Huette, Stephan; Meyer, Rolf-Volker  
 PATENT ASSIGNEE(S): Bayer A.-G., Germany  
 SOURCE: Ger. Offen., 12 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19647657	A1	19980520	DE 1996-19647657	19961118
WO 9822528	A1	19980528	WO 1997-EP6101	19971105
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9855507	A1	19980610	AU 1998-55507	19971105
PRIORITY APPLN. INFO.:			DE 1996-19647657	A 19961118
			WO 1997-EP6101	W 19971105
AB MgaAlb(OH)c(CO3)e.dH2O (a = 1-15, b = 1-8, c = 1-40, d = 0-20, e = 2-4) are useful for improving the resistance to Cl-containing water and (Cl-containing)				

low-mol.-weight hydrocarbons of polymeric materials such as spandex fibers.

IC ICM C08K003-18  
 ICS D01F006-94; D01F001-10

CC 37-6 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 40

ST hydrotalcite type additive polymer; chlorine resistant spandex fiber;  
 solvent resistant spandex fiber; aluminum magnesium carbonate hydroxide  
 spandex fiber

IT Polyesters, uses  
 RL: POF (Polymer in formulation); USES (Uses)  
 (aromatic; polymer materials containing hydrotalcite-type compds. for  
 improved resistance to chlorine-containing water and (chlorine-containing)  
 hydrocarbons)

IT Polyimides, uses  
 Polyimides, uses  
 RL: POF (Polymer in formulation); USES (Uses)  
 (polyamide-; polymer materials containing hydrotalcite-type compds. for  
 improved resistance to chlorine-containing water and (chlorine-containing)  
 hydrocarbons)

IT Polyesters, uses  
 Polyesters, uses  
 RL: POF (Polymer in formulation); USES (Uses)  
 (polycarbonate-; polymer materials containing hydrotalcite-type compds. for  
 improved resistance to chlorine-containing water and (chlorine-containing)  
 hydrocarbons)

IT Polycarbonates, uses  
 Polycarbonates, uses  
 RL: POF (Polymer in formulation); USES (Uses)  
 (polyester-; polymer materials containing hydrotalcite-type compds. for  
 improved resistance to chlorine-containing water and (chlorine-containing)  
 hydrocarbons)

IT Polyamides, uses  
 Polyamides, uses  
 RL: POF (Polymer in formulation); USES (Uses)  
 (polyimide-; polymer materials containing hydrotalcite-type compds. for  
 improved resistance to chlorine-containing water and (chlorine-containing)  
 hydrocarbons)

IT Chemically resistant materials  
 Plastic films  
 Solvent-resistant materials  
 (polymer materials containing hydrotalcite-type compds. for improved  
 resistance to chlorine-containing water and (chlorine-containing)  
 hydrocarbons)

IT Molded plastics, processes  
 RL: PEP (Physical, engineering or chemical process); PROC (Process)  
 (polymer materials containing hydrotalcite-type compds. for improved  
 resistance to chlorine-containing water and (chlorine-containing)  
 hydrocarbons)

IT Phenoxy resins  
 RL: POF (Polymer in formulation); USES (Uses)  
 (polymer materials containing hydrotalcite-type compds. for improved  
 resistance to chlorine-containing water and (chlorine-containing)  
 hydrocarbons)

IT Polyamides, uses  
 RL: POF (Polymer in formulation); USES (Uses)  
 (polymer materials containing hydrotalcite-type compds. for improved  
 resistance to chlorine-containing water and (chlorine-containing)  
 hydrocarbons)

IT Polycarbonates, uses

RL: POF (Polymer in formulation); USES (Uses)  
(polymer materials containing hydrotalcite-type compds. for improved  
resistance to chlorine-containing water and (chlorine-containing)  
hydrocarbons)

IT Polyesters, uses

RL: POF (Polymer in formulation); USES (Uses)  
(polymer materials containing hydrotalcite-type compds. for improved  
resistance to chlorine-containing water and (chlorine-containing)  
hydrocarbons)

IT Polyimides, uses

RL: POF (Polymer in formulation); USES (Uses)  
(polymer materials containing hydrotalcite-type compds. for improved  
resistance to chlorine-containing water and (chlorine-containing)  
hydrocarbons)

IT Polyolefins

RL: POF (Polymer in formulation); USES (Uses)  
(polymer materials containing hydrotalcite-type compds. for improved  
resistance to chlorine-containing water and (chlorine-containing)  
hydrocarbons)

IT Polyoxyphenylenes

RL: POF (Polymer in formulation); USES (Uses)  
(polymer materials containing hydrotalcite-type compds. for improved  
resistance to chlorine-containing water and (chlorine-containing)  
hydrocarbons)

IT Polysulfones, uses

RL: POF (Polymer in formulation); USES (Uses)  
(polymer materials containing hydrotalcite-type compds. for improved  
resistance to chlorine-containing water and (chlorine-containing)  
hydrocarbons)

IT Polythiophenylenes

RL: POF (Polymer in formulation); USES (Uses)  
(polymer materials containing hydrotalcite-type compds. for improved  
resistance to chlorine-containing water and (chlorine-containing)  
hydrocarbons)

IT Polyurethanes, uses

RL: POF (Polymer in formulation); USES (Uses)  
(polymer materials containing hydrotalcite-type compds. for improved  
resistance to chlorine-containing water and (chlorine-containing)  
hydrocarbons)

IT Spandex fibers

RL: PRP (Properties)  
(polymer materials containing hydrotalcite-type compds. for improved  
resistance to chlorine-containing water and (chlorine-containing)  
hydrocarbons)

IT Vinyl compounds, uses

RL: POF (Polymer in formulation); USES (Uses)  
(polymers; polymer materials containing hydrotalcite-type compds. for  
improved resistance to chlorine-containing water and (chlorine-containing)  
hydrocarbons)

IT 109-89-7D, Diethylamine, reaction products with polyurethanes

107375-35-9D, reaction products with diethylamine

135772-19-9D, reaction products with diethylamine

RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)

(fibers; polymer materials containing hydrotalcite-type compds. for  
improved resistance to chlorine-containing water and (chlorine-containing)  
hydrocarbons)

IT 95101-08-9 135752-28-2, Aluminum magnesium carbonate

hydroxide 145424-07-3, Aluminum magnesium carbonate hydroxide

hydrate 207921-96-8 207921-98-0 207922-01-8

207922-03-0 207922-06-3

RL: MOA (Modifier or additive use); USES (Uses)  
 (polymer materials containing hydrotalcite-type compds. for improved  
 resistance to chlorine-containing water and (chlorine-containing)  
 hydrocarbons)

IT 9002-86-2, PVC 9003-53-6, Polystyrene  
 RL: POF (Polymer in formulation); USES (Uses)  
 (polymer materials containing hydrotalcite-type compds. for improved  
 resistance to chlorine-containing water and (chlorine-containing)  
 hydrocarbons)

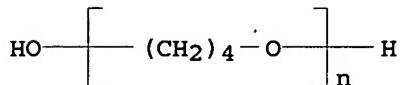
IT 107375-35-9D, reaction products with diethylamine  
 135772-19-9D, reaction products with diethylamine  
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)  
 (fibers; polymer materials containing hydrotalcite-type compds. for  
 improved resistance to chlorine-containing water and (chlorine-containing)  
 hydrocarbons)

RN 107375-35-9 HCPLUS

CN 1,2-Ethanediamine, polymer with  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-  
 butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene], block (9CI) (CA  
 INDEX NAME)

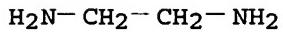
CM 1

CRN 25190-06-1  
 CMF (C4 H8 O)n H2 O  
 CCI PMS



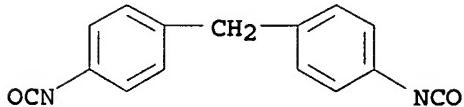
CM 2

CRN 107-15-3  
 CMF C2 H8 N2



CM 3

CRN 101-68-8  
 CMF C15 H10 N2 O2

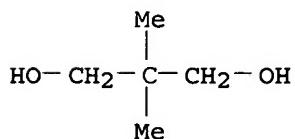


RN 135772-19-9 HCPLUS  
 CN Hexanedioic acid, polymer with 2,2-dimethyl-1,3-propanediol,  
 1,2-ethanediamine, 1,6-hexanediol and 1,1'-methylenebis[4-  
 isocyanatobenzene], block (9CI) (CA INDEX NAME)

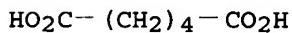
CM 1

CRN 629-11-8  
CMF C6 H14 O2

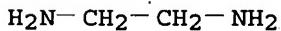
CM 2

CRN 126-30-7  
CMF C5 H12 O2

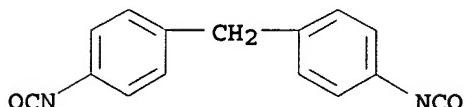
CM 3

CRN 124-04-9  
CMF C6 H10 O4

CM 4

CRN 107-15-3  
CMF C2 H8 N2

CM 5

CRN 101-68-8  
CMF C15 H10 N2 O2

IT 95101-08-9 135752-28-2, Aluminum magnesium carbonate hydroxide 145424-07-3, Aluminum magnesium carbonate hydroxide hydrate 207921-96-8 207921-98-0 207922-03-0  
207922-06-3

RL: MOA (Modifier or additive use); USES (Uses)  
 (polymer materials containing hydrotalcite-type compds. for improved  
 resistance to chlorine-containing water and (chlorine-containing)  
 hydrocarbons)

RN 95101-08-9 HCAPLUS

CN Aluminate ( $\text{Al(OH)}_{63-}$ ), ( $\text{OC-6-11}$ ) $^-$ , magnesium carbonate (2:6:3), hydrate  
 (9CI) (CA INDEX NAME)

CM 1

CRN 94955-62-1

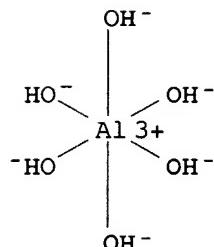
CMF C O3 . 2/3 Al H6 O6 . 2 Mg

CM 2

CRN 18893-33-9

CMF Al H6 O6

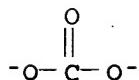
CCI CCS



CM 3

CRN 3812-32-6

CMF C O3



RN 135752-28-2 HCAPLUS

CN Aluminum magnesium carbonate hydroxide (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
HO	x	14280-30-9
Mg	x	7439-95-4
Al	x	7429-90-5
CO3	x	3812-32-6

RN 145424-07-3 HCAPLUS

CN Aluminum magnesium carbonate hydroxide, hydrate (9CI) (CA INDEX NAME)

CM 1

CRN 135752-28-2

CMF C O<sub>3</sub> . Al . H O . Mg  
CCI TIS

CM 2

CRN 14280-30-9  
CMF H O

OH<sup>-</sup>

CM 3

CRN 7439-95-4  
CMF Mg

Mg

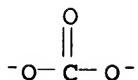
CM 4

CRN 7429-90-5  
CMF Al

Al

CM 5

CRN 3812-32-6  
CMF C O<sub>3</sub>



RN 207921-96-8 HCAPLUS  
CN Aluminate (Al(OH)63-) , (OC-6-11)-, magnesium carbonate hydroxide  
(2:6:1:4), pentahydrate (9CI) (CA INDEX NAME)

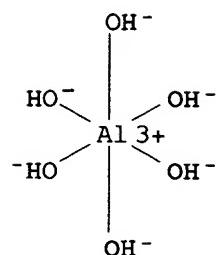
CM 1

CRN 11097-59-9  
CMF C O<sub>3</sub> . 2 Al H<sub>6</sub> O<sub>6</sub> . 4 H O . 6 Mg

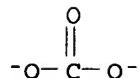
\*

CM 2

CRN 18893-33-9  
CMF Al H<sub>6</sub> O<sub>6</sub>  
CCI CCS



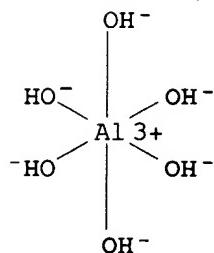
CM 3

CRN 3812-32-6  
CMF C O3RN 207921-98-0 HCAPLUS  
CN Aluminate ( $\text{Al}(\text{OH})_6\text{3-}$ ) , ( $\text{OC-6-11}$ )-, magnesium carbonate (2:6:3), pentahydrate (9CI) (CA INDEX NAME)

CM 1

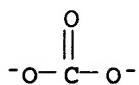
CRN 94955-62-1  
CMF C O3 . 2/3 Al H6 O6 . 2 Mg

CM 2

CRN 18893-33-9  
CMF Al H6 O6  
CCI CCS

CM 3

CRN 3812-32-6  
CMF C O3



RN 207922-03-0 HCAPLUS

CN Aluminate ( $\text{Al(OH)}_{63-}$ ), ( $\text{OC-6-11}-$ ), magnesium carbonate (2:6:3), heptahydrate (9CI) (CA INDEX NAME)

CM 1

CRN 94955-62-1

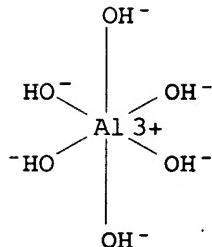
CMF C O3 . 2/3 Al H6 O6 . 2 Mg

CM 2

CRN 18893-33-9

CMF Al H6 O6

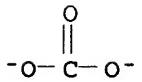
CCI CCS



CM 3

CRN 3812-32-6

CMF C O3



RN 207922-06-3 HCAPLUS

CN Aluminate ( $\text{Al(OH)}_{63-}$ ), ( $\text{OC-6-11}-$ ), magnesium carbonate hydroxide (5:10:2:1), octahydrate (9CI) (CA INDEX NAME)

CM 1

CRN 207922-05-2

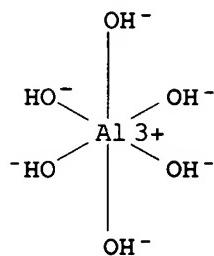
CMF C O3 . 5/2 Al H6 O6 . 1/2 H O . 5 Mg

CM 2

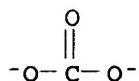
CRN 18893-33-9

CMF Al H6 O6

CCI CCS



CM 3

CRN 3812-32-6  
CMF C O3

L21 ANSWER 36 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1998:335049 HCPLUS  
 DOCUMENT NUMBER: 129:29058  
 TITLE: Improvement of the resistance of elastan fibers to dry-cleaning solvents  
 PATENT ASSIGNEE(S): Bayer A.-G., Germany  
 SOURCE: Ger. Offen., 8 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19647572	A1	19980520	DE 1996-19647572	19961118
EP 843031	A2	19980520	EP 1997-119307	19971105
EP 843031	A3	19980722		
EP 843031	B1	20040512		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
AT 266751	E	20040515	AT 1997-119307	19971105
PT 843031	T	20040930	PT 1997-119307	19971105
ES 2218626	T3	20041116	ES 1997-119307	19971105
US 5969028	A	19991019	US 1997-969506	19971113
CA 2221065	AA	19980518	CA 1997-2221065	19971114
JP 10168662	A2	19980623	JP 1997-329730	19971114

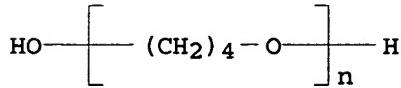
PRIORITY APPLN. INFO.: DE 1996-19647572 A 19961118  
 AB The resistance of spandex fibers to dry-cleaning solvents is improved by addition of 0.05-30% finely divided hydrotalcite and(or) other basic metal Al hydroxide compds. such as M<sub>1-x</sub>2+Al<sub>x</sub>(OH)<sub>2</sub>Ax/nH<sub>2</sub>O (M<sup>2+</sup> = Mg or Zn; An<sup>-</sup> = OH<sup>-</sup>, F<sup>-</sup>, Cl<sup>-</sup>, Br<sup>-</sup>, CO<sub>3</sub><sup>2-</sup>, SO<sub>4</sub><sup>2-</sup>, HPO<sub>4</sub><sup>2-</sup>, silicate, acetate, or oxalate; 0 < x ≤ 0.5; 0 ≤ m < 1) or MgsAlt(OH)<sub>u</sub>(A-2)<sub>v</sub>.wH<sub>2</sub>O (s = 1-15, t = 1-8, u = 1-40, w = 0-20, v = 1-5) to the spinning dope.

IC ICM D01F006-94

ICS C08K003-22; C08K009-04; C01F007-00  
 ICA C08G018-48; C08G018-42; C08G018-44; C08G018-60; C08G018-62; C08G018-52;  
 C08G018-65; C08G077-12  
 CC 40-2 (Textiles and Fibers)  
 ST spandex fiber dry cleaning solvent resistant; hydrotalcite additive  
 spandex fiber; magnesium aluminum hydroxide additive spandex fiber; zinc  
 aluminum hydroxide additive spandex fiber; aluminum metal hydroxide  
 additive spandex fiber  
 IT Minerals, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (hydrotalcite-group; improvement of the resistance of elastan fibers to  
 dry-cleaning solvents by addition of aluminum metal hydroxide-type compds.  
 to spinning dopes)  
 IT Solvent-resistant materials  
 (improvement of the resistance of elastan fibers to dry-cleaning  
 solvents by addition of aluminum metal hydroxide-type compds. to spinning  
 dopes)  
 IT Spandex fibers  
 RL: PRP (Properties)  
 (improvement of the resistance of elastan fibers to dry-cleaning  
 solvents by addition of aluminum metal hydroxide-type compds. to spinning  
 dopes)  
 IT 109-89-7D, Diethylamine, reaction products with polyoxyalkylene-  
 polyurethanes 107375-35-9, Ethylenediamine-MDI-  
 polytetrahydrofuran block copolymer  
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)  
 (fibers; improvement of the resistance of elastan fibers to  
 dry-cleaning solvents by addition of aluminum metal hydroxide-type compds.  
 to spinning dopes)  
 IT 95101-08-9 96492-35-2 119175-49-4  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (improvement of the resistance of elastan fibers to dry-cleaning  
 solvents by addition of aluminum metal hydroxide-type compds. to spinning  
 dopes)  
 IT 107375-35-9, Ethylenediamine-MDI-polytetrahydrofuran block  
 copolymer  
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)  
 (fibers; improvement of the resistance of elastan fibers to  
 dry-cleaning solvents by addition of aluminum metal hydroxide-type compds.  
 to spinning dopes)  
 RN 107375-35-9 HCPLUS  
 CN 1,2-Ethanediamine, polymer with  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-  
 butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene], block (9CI) (CA  
 INDEX NAME)

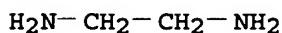
CM 1

CRN 25190-06-1  
 CMF (C<sub>4</sub>H<sub>8</sub>O)<sub>n</sub>H<sub>2</sub>O  
 CCI PMS



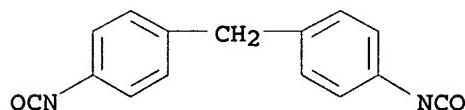
CM 2

CRN 107-15-3  
 CMF C2 H8 N2



CM 3

CRN 101-68-8  
 CMF C15 H10 N2 O2



IT 95101-08-9 96492-35-2 119175-49-4

RL: MOA (Modifier or additive use); USES (Uses)  
 (improvement of the resistance of elastan fibers to dry-cleaning  
 solvents by addition of aluminum metal hydroxide-type compds. to spinning  
 dopes)

RN 95101-08-9 HCAPLUS

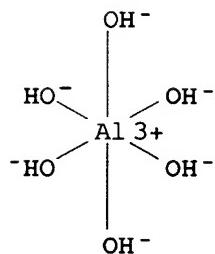
CN Aluminate (Al(OH)63-), (OC-6-11)-, magnesium carbonate (2:6:3), hydrate  
 (9CI) (CA INDEX NAME)

CM 1

CRN 94955-62-1  
 CMF C O3 . 2/3 Al H6 O6 . 2 Mg

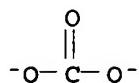
CM 2

CRN 18893-33-9  
 CMF Al H6 O6  
 CCI CCS



CM 3

CRN 3812-32-6  
 CMF C O3



RN 96492-35-2 HCAPLUS

CN Aluminate ( $\text{Al(OH)}_{63-}$ ), ( $\text{OC-6-11}-$ ), magnesium carbonate hydroxide  
(2:6:1:4), hydrate (9CI) (CA INDEX NAME)

CM 1

CRN 11097-59-9

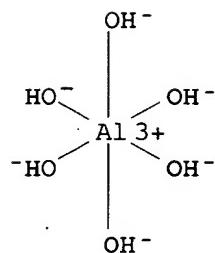
CMF C O3 . 2 Al H6 O6 . 4 H O . 6 Mg

CM 2

CRN 18893-33-9

CMF Al H6 O6

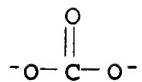
CCI CCS



CM 3

CRN 3812-32-6

CMF C O3



RN 119175-49-4 HCAPLUS

CN Aluminate ( $\text{Al(OH)}_{63-}$ ), ( $\text{OC-6-11}-$ ), magnesium carbonate (2:4:1),  
tetrahydrate (9CI) (CA INDEX NAME)

CM 1

CRN 69048-27-7

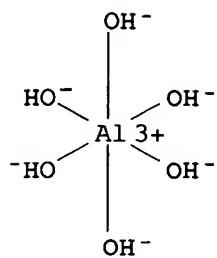
CMF C O3 . 2 Al H6 O6 . 4 Mg

CM 2

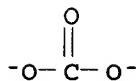
CRN 18893-33-9

CMF Al H6 O6

CCI CCS



CM 3

CRN 3812-32-6  
CMF C O3

L21 ANSWER 37 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1998:335048 HCPLUS  
 DOCUMENT NUMBER: 129:29057  
 TITLE: Chlorine-resistant elastan fibers  
 INVENTOR(S): Huette, Stephan; Meyer, Rolf-Volker; Wollweber,  
                  Hans-Joachim; Heinrich, Karin-Anke  
 PATENT ASSIGNEE(S): Bayer A.-G., Germany  
 SOURCE: Ger. Offen., 12 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19647571	A1	19980520	DE 1996-19647571	19961118
US 5969008	A	19991019	US 1997-960564	19971030
EP 843029	A1	19980520	EP 1997-119306	19971105
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
CA 2221073	AA	19980518	CA 1997-2221073	19971114
CA 2221073	C	19980518		
JP 10168657	A2	19980623	JP 1997-329712	19971114

PRIORITY APPLN. INFO.: DE 1996-19647571 A 19961118

AB The resistance of spandex fibers to Cl-containing water is improved by addition of finely divided hydrotalcite and(or) other basic metal Al hydroxide compds. such as M<sub>1-x</sub>Al<sub>x</sub>(OH)<sub>2</sub>A<sub>x</sub>/nn-.mH<sub>2</sub>O (M<sup>2+</sup> = Mg or Zn; An<sup>-</sup> = OH<sup>-</sup>, F<sup>-</sup>, Cl<sup>-</sup>, Br<sup>-</sup>, CO<sub>3</sub><sup>2-</sup>, SO<sub>4</sub><sup>2-</sup>, HPO<sub>4</sub><sup>2-</sup>, silicate, acetate, or oxalate; 0 < x ≤ 0.5; 0 ≤ m < 1) or MgsAlt(OH)<sub>u</sub>(A-2)<sub>v</sub>.wH<sub>2</sub>O (s = 1-15, t = 1-8, u = 1-40, w = 0-20, v = 1-5) coated by 0.1-30% polyorganosiloxanes and(or) polyorganohydrogensiloxanes to the spinning dope.

IC ICM D01F006-94

ICS D01F001-10; C08K003-18; C08L083-04; D03D015-00; D04B001-14

ICA C08G018-48; C08G018-42; C08G018-44; C08G018-60; C08G018-62; C08G018-52;

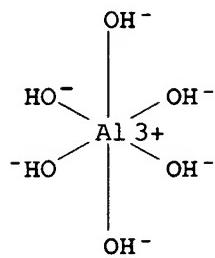
C08G018-65; C08G077-12  
CC 40-2 (Textiles and Fibers)  
ST chlorine resistant spandex fiber; magnesium aluminum hydroxide additive  
spandex fibers; hydrotalcite additive spandex fiber; polysiloxane coated  
additive spandex fiber; zinc aluminum hydroxide additive spandex fiber;  
metal aluminum hydroxide additive spandex fiber  
IT Chemically resistant materials  
(chlorine-resistant spandex fibers containing polysiloxane-coated metal  
aluminum hydroxide-type compds.)  
IT Polysiloxanes, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(chlorine-resistant spandex fibers containing polysiloxane-coated metal  
aluminum hydroxide-type compds.)  
IT Spandex fibers  
RL: PRP (Properties)  
(chlorine-resistant spandex fibers containing polysiloxane-coated metal  
aluminum hydroxide-type compds.)  
IT Minerals, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(hydrotalcite-group; chlorine-resistant spandex fibers containing  
polysiloxane-coated metal aluminum hydroxide-type compds.)  
IT 9016-00-6, Dimethylsilanediol homopolymer, sru 31900-57-9,  
Dimethylsilanediol homopolymer 95101-08-9 96492-35-2  
RL: MOA (Modifier or additive use); USES (Uses)  
(chlorine-resistant spandex fibers containing polysiloxane-coated metal  
aluminum hydroxide-type compds.)  
IT 109-89-7D, Diethylamine, reaction products with polyurethanes  
107375-35-9D, reaction products with diethylamine  
135772-19-9D, reaction products with diethylamine  
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)  
(fibers; chlorine-resistant spandex fibers containing polysiloxane-coated  
metal aluminum hydroxide-type compds.)  
IT 95101-08-9 96492-35-2  
RL: MOA (Modifier or additive use); USES (Uses)  
(chlorine-resistant spandex fibers containing polysiloxane-coated metal  
aluminum hydroxide-type compds.)  
RN 95101-08-9 HCPLUS  
CN Aluminate (Al(OH)63-), (OC-6-11)-, magnesium carbonate (2:6:3), hydrate  
(9CI) (CA INDEX NAME)

CM 1

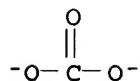
CRN 94955-62-1  
CMF C O3 . 2/3 Al H6 O6 . 2 Mg

CM 2

CRN 18893-33-9  
CMF Al H6 O6  
CCI CCS



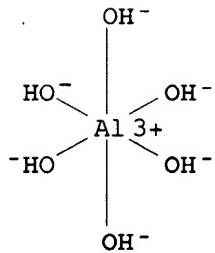
CM 3

CRN 3812-32-6  
CMF C O3RN 96492-35-2 HCAPLUS  
CN Aluminate ( $\text{Al(OH)}_{63-}$ ), ( $\text{OC-6-11}$ )-, magnesium carbonate hydroxide (2:6:1:4), hydrate (9CI) (CA INDEX NAME)

CM 1

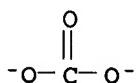
CRN 11097-59-9  
CMF C O3 . 2 Al H6 O6 . 4 H O . 6 Mg

CM 2

CRN 18893-33-9  
CMF Al H6 O6  
CCI CCS

CM 3

CRN 3812-32-6  
CMF C O3



IT 107375-35-9D, reaction products with diethylamine  
 135772-19-9D, reaction products with diethylamine  
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)  
 (fibers; chlorine-resistant spandex fibers containing polysiloxane-coated  
 metal aluminum hydroxide-type compds.)

RN 107375-35-9 HCPLUS

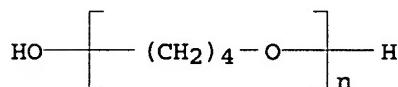
CN 1,2-Ethanediamine, polymer with  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyi) and 1,1'-methylenebis[4-isocyanatobenzene], block (9CI) (CA INDEX NAME)

CM 1

CRN 25190-06-1

CMF (C<sub>4</sub> H<sub>8</sub> O)<sub>n</sub> H<sub>2</sub> O

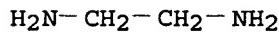
CCI PMS



CM 2

CRN 107-15-3

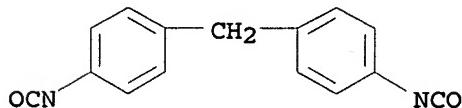
CMF C<sub>2</sub> H<sub>8</sub> N<sub>2</sub>



CM 3

CRN 101-68-8

CMF C<sub>15</sub> H<sub>10</sub> N<sub>2</sub> O<sub>2</sub>



RN 135772-19-9 HCPLUS

CN Hexanedioic acid, polymer with 2,2-dimethyl-1,3-propanediol,  
 1,2-ethanediamine, 1,6-hexanediol and 1,1'-methylenebis[4-isocyanatobenzene], block (9CI) (CA INDEX NAME)

CM 1

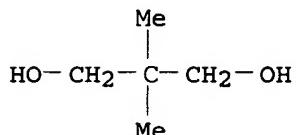
CRN 629-11-8

CMF C<sub>6</sub> H<sub>14</sub> O<sub>2</sub>

$\text{HO} - (\text{CH}_2)_6 - \text{OH}$

CM 2

CRN 126-30-7  
CMF C5 H12 O2



CM 3.

CRN 124-04-9  
CMF C6 H10 O4

$\text{HO}_2\text{C} - (\text{CH}_2)_4 - \text{CO}_2\text{H}$

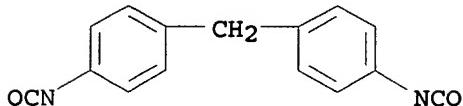
CM 4

CRN 107-15-3  
CMF C2 H8 N2

$\text{H}_2\text{N} - \text{CH}_2 - \text{CH}_2 - \text{NH}_2$

CM 5

CRN 101-68-8  
CMF C15 H10 N2 O2



L21 ANSWER 38 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1996:50787 HCPLUS  
 DOCUMENT NUMBER: 124:90212  
 TITLE: Chlorine-resistant polyurethane-nylon 66  
      blend fabrics for swimming suits with good softness  
      and colorfastness and their manufacture  
 INVENTOR(S): Hashimoto, Makiko; Kojima, Yoshiaki

PATENT ASSIGNEE(S) : Asahi Chemical Ind, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07279044	A2	19951024	JP 1994-70845	19940408
PRIORITY APPLN. INFO.:			JP 1994-70845	19940408
AB Title fabrics are prepared by treating fabrics comprising polyurethane elastic fibers (A) containing chlorine-degradation preventing agents and nylon 66 (I) fibers with denier per filament ≤ 2, with fixing agents containing natural tannins at pH 4-5 and 80-100° to give fabrics comprising A fibers with natural tannin content ≤ 0.5% and I fibers with natural tannin content 1-4%. A solution containing ethylenediamine-polytetramethylene glycol-MDI copolymer and 2.5% hydrotalcite was spun to give spandex fibers, and a tricot comprising this fiber and 50-denier/48-filament I fibers was treated with an aqueous solution containing 8% (on fiber) Hifix SLA (natural tannin content 30%) for 30 min at pH 4.3 and 100° to give a fabric showing stress retention 85% after immersion in an aqueous solution containing 300 ppm Cl for 30 h by a specified test,				
chlorine colorfastness (gray scale) 4, and laundering colorfastness rating (JIS L-0884-A) 4.				
IC ICM D06M013-238				
IC ICS D03D015-00; D03D015-08; D06P005-06				
CC 40-9 (Textiles and Fibers)				
ST chlorine resistant spandex nylon blend fabric; hydrotalcite spandex fiber chlorine resistance; tannin fixing agent spandex fiber; colorfastness chlorine resistant spandex nylon blend; swimming suit spandex nylon blend				
IT Spandex fibers				
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (blends with nylon 66 fibers; treatment with tannins for swimming suits with good softness and colorfastness)				
IT Polyamide fibers, uses				
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (blends with spandex fibers; treatment with tannins for swimming suits with good softness and colorfastness)				
IT Tannins				
RL: TEM (Technical or engineered material use); USES (Uses) (fixing agents; for finishing polyurethane-nylon 66 blend fabrics for improved chlorine resistance and good colorfastness)				
IT Wearing apparel				
(swimwear, chlorine-resistant polyurethane-nylon 66 blend fabrics with good softness and colorfastness for)				
IT 12304-65-3, Hydrotalcite				
RL: MOA (Modifier or additive use); USES (Uses) (chlorine degradation inhibitor, spandex fibers containing; for manufacture of chlorine-resistant polyurethane-nylon 66 blend fabrics for swimming suits)				
IT 32131-17-2, Nylon 66, uses				
RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (fiber, blends with spandex fibers; treatment with tannins for swimming				

suits with good softness and colorfastness)

IT 9053-66-1, Ethylenediamine-MDI-polytetramethylene glycol copolymer  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (fiber, elastic, blends with nylon 66 fibers; treatment with tannins for swimming suits with good softness and colorfastness)

IT 7782-50-5, Chlorine, miscellaneous  
 RL: MSC (Miscellaneous)  
 (resistance to; of polyurethane-nylon 66 blend fabrics for swimming suits)

IT 12304-65-3, Hydrotalcite  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (chlorine degradation inhibitor, spandex fibers containing; for manufacture of chlorine-resistant polyurethane-nylon 66 blend fabrics for swimming suits)

RN 12304-65-3 HCPLUS

CN Hydrotalcite ( $Mg_6(CO_3)[Al(OH)_6]_2(OH)_4 \cdot 4H_2O$ ) (9CI) (CA INDEX NAME)

CM 1

CRN 11097-59-9

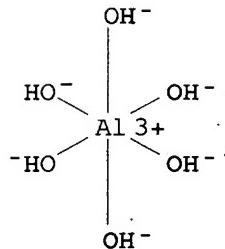
CMF C O3 . 2 Al H6 O6 . 4 H O . 6 Mg

CM 2

CRN 18893-33-9

CMF Al H6 O6

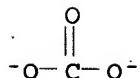
CCI CCS



CM 3

CRN 3812-32-6

CMF C O3



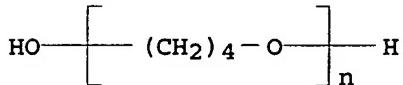
IT 9053-66-1, Ethylenediamine-MDI-polytetramethylene glycol copolymer  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (fiber, elastic, blends with nylon 66 fibers; treatment with tannins for swimming suits with good softness and colorfastness)

RN 9053-66-1 HCPLUS

CN 1,2-Ethanediamine, polymer with  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX NAME)

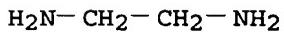
CM 1

CRN 25190-06-1  
 CMF (C<sub>4</sub> H<sub>8</sub> O)<sub>n</sub> H<sub>2</sub> O  
 CCI PMS



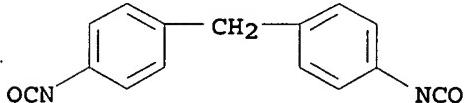
CM 2

CRN 107-15-3  
 CMF C<sub>2</sub> H<sub>8</sub> N<sub>2</sub>



CM 3

CRN 101-68-8  
 CMF C<sub>15</sub> H<sub>10</sub> N<sub>2</sub> O<sub>2</sub>



L21 ANSWER 39 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:234782 HCAPLUS

DOCUMENT NUMBER: 122:12066

TITLE: Dyed knits from spandex fibers and polyester fibers for swimsuits with improved chlorine resistance and their manufacture

INVENTOR(S): Hayashi, Kyohide; Araki, Yoshio

PATENT ASSIGNEE(S): Toyo Boseki, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06212543	A2	19940802	JP 1993-7621	19930120
PRIORITY APPLN. INFO.:			JP 1993-7621	19930120
AB	The knits comprise polyurethane elastic fibers containing 0.5-4.5%			

MgO, ZnO, Al<sub>2</sub>O<sub>3</sub>, Mg(OH)<sub>2</sub>, Zn(OH)<sub>2</sub>, Al(OH)<sub>3</sub>, and/or hydrotalcite and cationic-dyeable polyester fibers consisting of polyesters containing ≥2 mol% (on dicarboxylic acid) units of metal sulfonate group-containing compds. and exhibiting toughness (product of tenacity in g/denier and square root of elongation) ≥22 and tenacity ≥4.0 g/denier on dyeing the fibers with cationic dyes at normal pressure and are dyed at 80-100°. A solution containing MDI-polytetramethylene glycol-1,2-propylenediamine block copolymer (I) containing 3% (on I) MgO was spun to give elastic fibers (A), and di-Me terephthalate-ethylene glycol-sodium di-Me 5-sulfoisophthalate copolyester containing HO(CH<sub>2</sub>CH<sub>2</sub>)<sub>m</sub>R(OCH<sub>2</sub>CH<sub>2</sub>)<sub>n</sub>OH (R = 2,2-dimethylpropylene; m + n = 4) units was spun, drawn, and heat treated at 150° to give cationic-dyeable noncircular fibers (B). A knit comprising A fibers and B fibers was prepared and dyed with a solution containing 1.8% (on fiber) Aizen Cathilon Red FB-DP for 40 min at 95° to give a dyed knit exhibiting no yarn degradation after 200 h in a swimming pool.

- IC ICM D04B021-18  
 ICS A41D007-00; D01F001-10; D01F006-62; D01F006-70; D01F006-84;  
 D01F006-94; D04B021-00
- CC 40-6 (Textiles and Fibers)
- ST spandex polyester blend swimsuit chlorine resistance; cationic dyeing spandex polyester blend swimsuit; magnesium oxide spandex fiber chlorine resistance
- IT Polyester fibers, uses  
 Spandex fibers  
 RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (dyed knits from spandex fibers and polyester fibers for swimsuits with improved chlorine resistance)
- IT Dyeing  
 (cationic, of knits from spandex fibers and polyester fibers for swimsuits with improved chlorine resistance)
- IT Wearing apparel  
 (swimwear, knits from spandex fibers and polyester fibers for swimsuits with improved chlorine resistance for)
- IT 1309-42-8, Magnesium hydroxide 1309-48-4, Magnesium oxide, uses  
 1314-13-2, Zinc oxide, uses 1344-28-1, Aluminum oxide 20427-58-1, Zinc hydroxide 21645-51-2, Aluminum hydroxide, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (agent for prevention of degradation by chlorine water; dyed knits from spandex fibers and polyester fibers for swimsuits with improved chlorine resistance)
- IT 12304-65-3, Hydrotalcite  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (dyed knits from spandex fibers and polyester fibers for swimsuits with improved chlorine resistance)
- IT 142149-42-6  
 RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (fiber; dyed knits from spandex fibers and polyester fibers for swimsuits with improved chlorine resistance)
- IT 111634-02-7  
 RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (spandex fiber; dyed knits from spandex fibers and polyester fibers for swimsuits with improved chlorine resistance)
- IT 12304-65-3, Hydrotalcite  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (dyed knits from spandex fibers and polyester fibers for swimsuits with improved chlorine resistance)

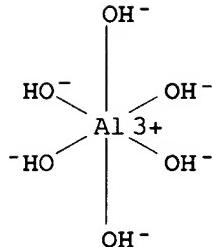
RN 12304-65-3 HCAPLUS  
 CN Hydrotalcite ( $Mg_6(CO_3)[Al(OH)_6]_2(OH)_4 \cdot 4H_2O$ ) (9CI) (CA INDEX NAME)

CM 1

CRN 11097-59-9  
 CMF C O<sub>3</sub> . 2 Al H<sub>6</sub> O<sub>6</sub> . 4 H O . 6 Mg

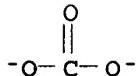
CM 2

CRN 18893-33-9  
 CMF Al H<sub>6</sub> O<sub>6</sub>  
 CCI CCS



CM 3

CRN 3812-32-6  
 CMF C O<sub>3</sub>



IT 111634-02-7

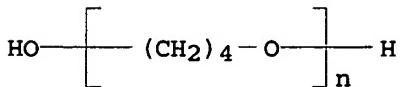
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (spandex fiber; dyed knits from spandex fibers and polyester fibers for swimsuits with improved chlorine resistance)

RN 111634-02-7 HCAPLUS

CN 1,2-Propanediamine, polymer with  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene], block (9CI) (CA INDEX NAME)

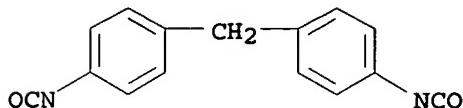
CM 1

CRN 25190-06-1  
 CMF (C<sub>4</sub>H<sub>8</sub>O)<sub>n</sub>H<sub>2</sub>O  
 CCI PMS



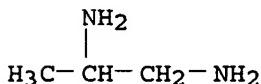
CM 2

CRN 101-68-8  
 CMF C15 H10 N2 O2



CM 3

CRN 78-90-0  
 CMF C3 H10 N2



L21 ANSWER 40 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1994:411678 HCAPLUS  
 DOCUMENT NUMBER: 121:11678  
 TITLE: Dyeing or printing spandex fiber blend knits with improved chlorine resistance  
 INVENTOR(S): Ido, Yoshinori; Yamaoka, Yoshio; Fujii, Yoshio; Arimatsu, Giichi; Chiba, Shuji; Shirasu, Koji; Suzuki, Hajime  
 PATENT ASSIGNEE(S): Toyo Boseki, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05302278	A2	19931116	JP 1992-104820	19920423
JP 3080197	B2	20000821		

PRIORITY APPLN. INFO.: JP 1992-104820 19920423  
 AB The knits comprising polyurethane elastic fibers containing MgO, ZnO, Al2O3, Mg(OH)2, Zn(OH)2, Al(OH)3, and/or hydrotalcites and polyamide fibers and/or cationic-dyeable polyester fibers, are dyed with liqs. containing acid dyes, metalized dyes, fluorescent dyes, disperse dyes, reactive dyes, direct dyes, or cationic dyes and 0.01-10% (on fiber) oxalic acid esters. Thus, a knit of spun fibers from a composition containing MDI-polytetramethylene glycol-1,2-propylenediamine copolymer and 3% (on polyurethane) MgO, and nylon 6 fibers was prepared and dyed with a liquid containing 0.3% (on fiber) Solot Rhodamine B and 2 g/L di-Et oxalate to give a dyed fabric with good Cl resistance.

IC ICM D06P001-651  
 ICS D06P001-673; D06P003-82  
 CC 40-6 (Textiles and Fibers)

## Section cross-reference(s): 41

ST dyeing spandex blend knit chlorine resistance; printing spandex blend knit chlorine resistance; oxalate spandex fiber dyeing chlorine resistance; zinc oxide spandex dyeing chlorine resistance; alumina spandex fiber dyeing chlorine resistance; magnesium hydroxide spandex dyeing chlorine resistance; hydrotalcite spandex fiber dyeing chlorine resistance; polyamide spandex fiber blend knit dyeing; polyester spandex fiber blend knit dyeing

IT Spandex fibers  
 RL: USES (Uses)  
 (blends with polyamide fibers and/or polyester fibers, with compns. containing dyes and oxalate esters, with improved chlorine resistance)

IT Polyamide fibers, uses  
 Polyester fibers, uses  
 RL: USES (Uses)  
 (blends with spandex fibers, printing of, with compns. containing dyes and oxalate esters, with improved chlorine resistance)

IT Textile printing  
 (of spandex fiber blends with polyamide fibers and/or polyester fibers, with compns. containing dyes and oxalate esters, with improved chlorine resistance)

IT 95-92-1, Diethyl oxalate 553-90-2, Dimethyl oxalate  
 RL: USES (Uses)  
 (dye solns. containing, for polyurethane fibers, for improved chlorine resistance)

IT 25038-54-4, Poly( $\epsilon$ -caprolactam), uses  
 RL: USES (Uses)  
 (fiber, blends with spandex fibers, dyeing of knits, with dye solns. containing oxalate esters, with improved chlorine resistance)

IT 111634-02-7  
 RL: USES (Uses)  
 (fiber, dyeing of, with dye solns. containing oxalate esters, with improved chlorine resistance)

IT 1309-42-8, Magnesium hydroxide 1309-48-4, Magnesium oxide, uses  
 1314-13-2, Zinc oxide, uses 1344-28-1, Aluminum oxide, uses  
 20427-58-1, Zinc hydroxide 21645-51-2, Aluminum hydroxide, uses  
 RL: USES (Uses)  
 (polyurethane fibers containing, for chlorine resistance)

IT 12304-65-3, Hydrotalcite  
 RL: USES (Uses)  
 (polyurethane-based fibers containing, for union cloth)

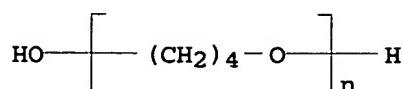
IT 111634-02-7  
 RL: USES (Uses)  
 (fiber, dyeing of, with dye solns. containing oxalate esters, with improved chlorine resistance)

RN 111634-02-7 HCPLUS

CN 1,2-Propanediamine, polymer with  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene], block (9CI) (CA INDEX NAME)

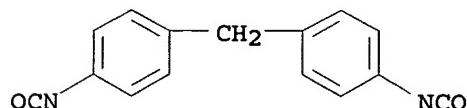
CM 1

CRN 25190-06-1  
 CMF (C<sub>4</sub> H<sub>8</sub> O)<sub>n</sub> H<sub>2</sub> O  
 CCI PMS



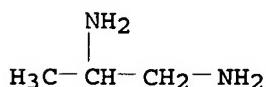
CM 2

CRN 101-68-8  
 CMF C15 H10 N2 O2



CM 3

CRN 78-90-0  
 CMF C3 H10 N2



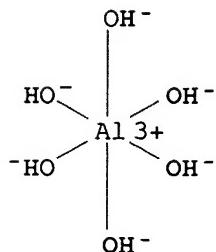
IT 12304-65-3, Hydrotalcite  
 RL: USES (Uses)  
 (polyurethane-based fibers containing, for union cloth)  
 RN 12304-65-3 HCAPLUS  
 CN Hydrotalcite ( $\text{Mg}_6(\text{CO}_3)[\text{Al}(\text{OH})_6]_2(\text{OH})_4 \cdot 4\text{H}_2\text{O}$ ) (9CI) (CA INDEX NAME)

CM 1

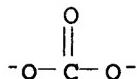
CRN 11097-59-9  
 CMF C O3 . 2 Al H6 O6 . 4 H O . 6 Mg

CM 2

CRN 18893-33-9  
 CMF Al H6 O6  
 CCI CCS



CM 3

CRN 3812-32-6  
CMF C O3

L21 ANSWER 41 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1994:301078 HCAPLUS  
 DOCUMENT NUMBER: 120:301078  
 TITLE: Dyeing spandex fiber blend knits without loss of resistance to chlorine degradation  
 INVENTOR(S): Ido, Yoshinori; Yamaoka, Yoshio; Fujii, Yoshio; Arimatsu, Giichi; Chiba, Shuji; Shirasu, Koji; Suzuki, Hajime  
 PATENT ASSIGNEE(S): Toyo Boseki, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05302279	A2	19931116	JP 1992-102859	19920422
JP 3134962	B2	20010213		

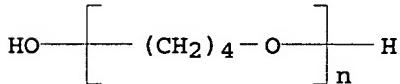
PRIORITY APPLN. INFO.: JP 1992-102859 19920422  
 AB In the title process, knits comprising spandex fibers containing 0.5-5.0% compds. (A) comprising MgO, ZnO, Mg(OH)<sub>2</sub>, Zn(OH)<sub>2</sub>, or hydrotalcites, and polyamide fibers and/or cationic-dyeable polyester fibers are dyed with solns. containing acid dyes, metalized dyes, fluorescent dyes, disperse dyes, reactive dyes, direct dyes, or cationic dyes, and acids so as to form A salts with the solubility in H<sub>2</sub>O ≤ 5.0 g/100 mL. A solution containing 30% MDI-polytetramethylene ether glycol-1,2-propylenediamine copolymer and 3% (on polyurethane) MgO was spun through a spinneret into air at 180°, false twisted, lubricated, and wound to give 40-denier/5-filament yarns., which were made into a knit with nylon 6 yarns and cationic-dyeable polyester yarns. The knit was scoured, relaxed, dried, heat-set, and dyed with a solution containing 0.3% (on fiber) Rhodamine B and 0.6 g/L oxalic acid at 40-95° for 45 min and at 95° for 30 min (bath ratio 1:13), cooled, washed, squeezed, and heat set at 160° for 30 s to give a fabric containing 2.3% MgO and showing good resistance to Cl degradation after 6 h in 30-ppm Cl solution (pH 7.5) at 30°.  
 IC ICM D06P003-82  
 ICS D06P001-653; D06P001-673  
 CC 40-6 (Textiles and Fibers)  
 Section cross-reference(s): 41  
 ST dyeing spandex blend knit chlorine resistance; polyester polyamide spandex blend knit dyeing; oxalic acid spandex blend knit dyeing  
 IT Acids, uses  
 RL: USES (Uses)  
 (dyeing solns. containing, for spandex fiber blend knits, for resistance to

degradation by chlorine)

- IT Dyeing  
 (of spandex fiber blend knits with polyamide fibers and polyester fibers, with solns. containing acids, with improved retention of chlorine degradation resistance)
- IT 64-18-6, Formic acid, uses 64-19-7, Acetic acid, uses 87-69-4, Tartaric acid, uses 144-62-7, Oxalic acid, uses 149-73-5, Trimethyl orthoformate 7783-20-2, Ammonium sulfate, uses  
 RL: USES (Uses)  
 (dyeing solns. containing, for spandex fiber blend knits, for resistance to degradation by chlorine)
- IT 111634-02-7  
 RL: USES (Uses)  
 (fiber, blends with polyester and polyamide fibers, dyeing of, with improved chlorine-degradation resistance)
- IT 25038-54-4, Nylon 6, uses  
 RL: USES (Uses)  
 (fiber, blends with spandex fibers, dyeing of, with resistance to chlorine degradation)
- IT 1309-42-8, Magnesium hydroxide 1309-48-4, Magnesium oxide, uses 1314-13-2, Zinc oxide, uses 12304-65-3, Hydrotalcite 20427-58-1, Zinc hydroxide  
 RL: USES (Uses)  
 (spandex fibers containing, for resistance to degradation by chlorine)
- IT 111634-02-7  
 RL: USES (Uses)  
 (fiber, blends with polyester and polyamide fibers, dyeing of, with improved chlorine-degradation resistance)
- RN 111634-02-7 HCPLUS
- CN 1,2-Propanediamine, polymer with  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene], block (9CI) (CA INDEX NAME)

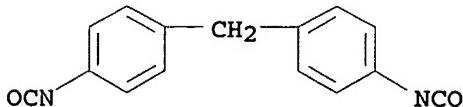
CM 1

CRN 25190-06-1  
 CMF (C<sub>4</sub> H<sub>8</sub> O)<sub>n</sub> H<sub>2</sub> O  
 CCI PMS



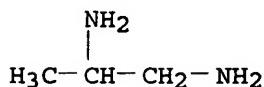
CM 2

CRN 101-68-8  
 CMF C<sub>15</sub> H<sub>10</sub> N<sub>2</sub> O<sub>2</sub>



CM 3

CRN 78-90-0  
 CMF C3 H10 N2



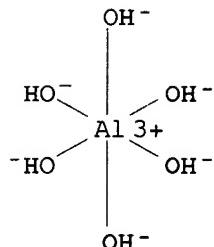
IT 12304-65-3, Hydrotalcite  
 RL: USES (Uses)  
 (spandex fibers containing, for resistance to degradation by chlorine)  
 RN 12304-65-3 HCAPLUS  
 CN Hydrotalcite ( $\text{Mg}_6(\text{CO}_3)[\text{Al}(\text{OH})_6]_2(\text{OH})_4 \cdot 4\text{H}_2\text{O}$ ) (9CI) (CA INDEX NAME)

CM 1

CRN 11097-59-9  
 CMF C O3 . 2 Al H6 O6 . 4 H O . 6 Mg

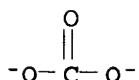
CM 2

CRN 18893-33-9  
 CMF Al H6 O6  
 CCI CCS



CM 3

CRN 3812-32-6  
 CMF C O3



L21 ANSWER 42 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1994:32161 HCAPLUS  
 DOCUMENT NUMBER: 120:32161  
 TITLE: Polyurethane compositions for spinning into  
 fibers useful in swimwear  
 INVENTOR(S): Kojima, Yoshiaki; Yoshizato, Akihiko  
 PATENT ASSIGNEE(S): Asahi Kasei Kogyo Kabushiki Kaisha, Japan  
 SOURCE: PCT Int. Appl., 26 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9306173	A1	19930401	WO 1992-JP1214	19920924
W: CA, KR, US RW: DE, FR, GB, IE, IT, NL				
JP 05078569	A2	19930330	JP 1991-243446	19910924
JP 3121058	B2	20001225		
CA 2096834	AA	19930325	CA 1992-2096834	19920924
CA 2096834	C	19991130		
EP 558758	A1	19930908	EP 1992-919864	19920924
EP 558758	B1	19981209		
R: DE, FR, GB, IE, IT, NL				
US 5447969	A	19950905	US 1993-64006	19930521
KR 9709334	B1	19970610	KR 1993-71546	19930524
PRIORITY APPLN. INFO.:			JP 1991-243446	A 19910924
			WO 1992-JP1214	W 19920924

- AB The title compns. with improved resistance to discoloration in the tannin treatment and to swelling to chlorination step, contain 0.1-10% hydrotalcite bearing crystalline water and having C10-30 fatty acids adhered thereto as Cl scavengers. A prepolymer of PTMG and MDI in AcNMe<sub>2</sub> containing additives and surface-treated Mg<sub>4.5</sub>Al<sub>2</sub>(OH)<sub>13</sub>CO<sub>3</sub>·3.5H<sub>2</sub>O could be spun into fibers with min. breaking complication.
- IC ICM C08L075-04  
ICS C08K009-04; D01F006-70; D01F001-10; D01F006-94
- CC 37-6 (Plastics Manufacture and Processing)  
Section cross-reference(s): 40
- ST spinnable polyurethane hydrotalcite hydrate compn; discoloration resistant spandex hydrotalcite hydrate compn; chlorine scavenging hydrotalcite hydrate compn; swimwear chlorine scavenging hydrotalcite fiber; swelling resistant spandex hydrotalcite hydrate compn
- IT Fatty acids, uses  
RL: USES (Uses)  
(agents, for surface of hydrotalcite for scavenging chlorine in spandex fibers)
- IT Spandex fibers  
RL: PREP (Preparation)  
(for swimwear, containing fatty acid-treated crystalline-hydrated hydrotalcites as chlorine scavengers)
- IT Discoloration prevention  
(in spandex fibers for swimming suits, surface-treated hydrotalcites as)
- IT Spandex fibers  
RL: PREP (Preparation)  
(polycarbonate-, for swimwear, containing fatty acid-treated crystalline-hydrated hydrotalcites as chlorine scavengers)
- IT Synthetic fibers, polymeric  
RL: PREP (Preparation)  
(polycarbonate-polyurethane, block, for swimwear, containing fatty acid-treated crystalline-hydrated hydrotalcites as chlorine scavengers)
- IT Polycarbonates, preparation  
RL: PREP (Preparation)  
(polyurethane-, block, fiber, for swimwear, containing fatty

acid-treated crystalline-hydrated hydrotalcites as chlorine scavengers)

IT Wearing apparel  
 (swimwear, spandex fiber for, containing fatty acid-treated  
 crystalline-hydrated  
 hydrotalcites as chlorine scavengers)

IT 112-85-6, Behenic acid  
 RL: USES (Uses)  
 (agents, for surface of hydrotalcite for scavenging chlorine in spandex  
 fibers)

IT 57-10-3, Palmitic acid, miscellaneous 57-11-4, Stearic acid,  
 miscellaneous 143-07-7, Lauric acid, miscellaneous  
 RL: MSC (Miscellaneous)  
 (agents, for surface of hydrotalcite for scavenging chlorine in spandex  
 fibers)

IT 9048-58-2, MDI-PTMG copolymer  
 RL: USES (Uses)  
 (fibers, blend, for swimwear, containing fatty acid-treated  
 crystalline-hydrated  
 hydrotalcites as chlorine scavengers)

IT 25766-21-6 151923-36-3  
 RL: USES (Uses)  
 (fibers, for swimwear, containing fatty acid-treated crystalline-hydrated  
 hydrotalcites as chlorine scavengers)

IT 89140-36-3 98036-77-2, Aluminum magnesium carbonate  
 hydroxide ( $\text{Al}_4\text{Mg}_9(\text{CO}_3)_2(\text{OH})_{26}$ )  
 RL: USES (Uses)  
 (scavenger for chlorine, in urethane fibers for swimwear)

IT 67-68-5, DMSO, uses 68-12-2, DMF, uses 127-19-5, Dimethylacetamide  
 RL: USES (Uses)  
 (solvents for urethanes, in spinning of fibers for swimwear containing  
 hydrotalcite hydrate)

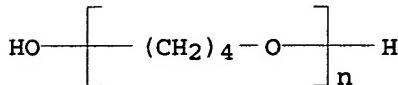
IT 9048-58-2, MDI-PTMG copolymer  
 RL: USES (Uses)  
 (fibers, blend, for swimwear, containing fatty acid-treated  
 crystalline-hydrated  
 hydrotalcites as chlorine scavengers)

RN 9048-58-2 HCPLUS

CN Poly(oxy-1,4-butanediyl),  $\alpha$ -hydro- $\omega$ -hydroxy-, polymer with  
 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX NAME)

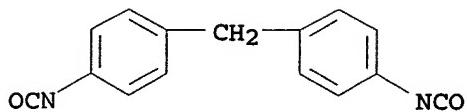
CM 1

CRN 25190-06-1  
 CMF (C<sub>4</sub> H<sub>8</sub> O)<sub>n</sub> H<sub>2</sub>O  
 CCI PMS



CM 2

CRN 101-68-8  
 CMF C<sub>15</sub> H<sub>10</sub> N<sub>2</sub> O<sub>2</sub>



IT 25766-21-6 151923-36-3

RL: USES (Uses)

(fibers, for swimwear, containing fatty acid-treated crystalline-hydrated hydrotalcites as chlorine scavengers)

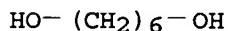
RN 25766-21-6 HCAPLUS

CN Hexanedioic acid, polymer with 2,2-dimethyl-1,3-propanediol, 1,6-hexanediol and 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX NAME)

CM 1

CRN 629-11-8

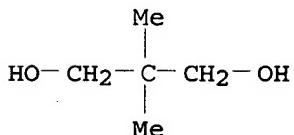
CMF C6 H14 O2



CM 2

CRN 126-30-7

CMF C5 H12 O2



CM 3

CRN 124-04-9

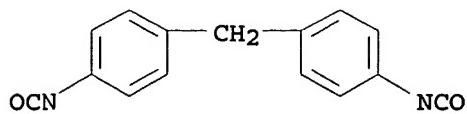
CMF C6 H10 O4



CM 4

CRN 101-68-8

CMF C15 H10 N2 O2



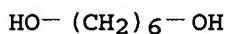
RN 151923-36-3 HCAPLUS

CN Carbonic acid, polymer with 1,6-hexanediol, 1,1'-methylenebis[4-isocyanatobenzene] and 1,5-pentanediol (9CI) (CA INDEX NAME)

CM 1

CRN 629-11-8

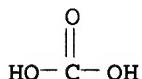
CMF C<sub>6</sub> H<sub>14</sub> O<sub>2</sub>



CM 2

CRN 463-79-6

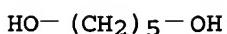
CMF C H<sub>2</sub> O<sub>3</sub>



CM 3

CRN 111-29-5

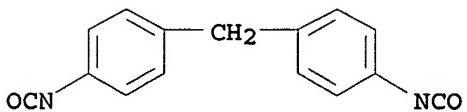
CMF C<sub>5</sub> H<sub>12</sub> O<sub>2</sub>



CM 4

CRN 101-68-8

CMF C<sub>15</sub> H<sub>10</sub> N<sub>2</sub> O<sub>2</sub>



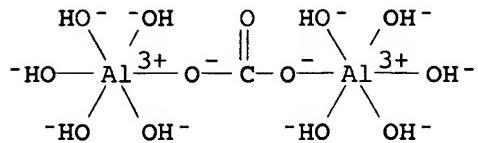
IT 89140-36-3 98036-77-2, Aluminum magnesium carbonate hydroxide (Al<sub>4</sub>Mg<sub>9</sub>(CO<sub>3</sub>)<sub>2</sub>(OH)<sub>26</sub>)

RL: USES (Uses)

(scavenger for chlorine, in urethane fibers for swimwear)

RN 89140-36-3 HCAPLUS

CN Aluminate(6-), [ $\mu$ -[carbonato(2-)O:O']]decahydroxydi-, magnesium (1:3)  
 (9CI) (CA INDEX NAME)



●3 Mg<sup>2+</sup>

RN 98036-77-2 HCPLUS

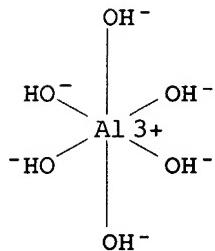
CN Aluminate (Al(OH)63-), (OC-6-11)-, magnesium carbonate hydroxide (4:9:2:2)  
 (9CI) (CA INDEX NAME)

CM 1

CRN 18893-33-9

CMF Al H6 O6

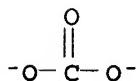
CCI CCS



CM 2

CRN 3812-32-6

CMF C O3



L21 ANSWER 43 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1993:451267 HCPLUS

DOCUMENT NUMBER: 119:51267

TITLE: Dyeing of fabrics containing polyurethane  
 and polyamide fibers

INVENTOR(S): Ido, Yoshinori; Arimatsu, Giichi; Suzuki, Hajime;  
 Chiba, Shuji

PATENT ASSIGNEE(S): Toyo Boseki, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05009878	A2	19930119	JP 1991-190958	19910704
JP 3087857	B2	20000911		

PRIORITY APPLN. INFO.: JP 1991-190958 19910704  
 AB Fabrics of polyurethane elastic fibers containing 0.5-5.0% MgO, ZnO, Al<sub>2</sub>O<sub>3</sub>, Mg(OH)<sub>2</sub>, Zn(OH)<sub>2</sub>, Al(OH)<sub>3</sub>, and/or hydrotalcite and polyamide fibers are dyed in the presence of orthoformate esters, and the dyes are fixed by anionic phenolic compds. which do not assume a quinone structure in contact with alkali, giving good color fastness in the presence of chlorine-containing water. A fabric containing nylon 6 fibers and elastic fibers

prepared from 1,2-propanediamine-MDI-PTMG copolymer containing 3% powdered MgO (0.1-2 µm), antioxidant, UV absorber, and yellowing inhibitor was dyed with Solar Rhodamine B in the presence of tri-Me orthoformate and treated with Nylon Super N (condensate of bisphenol sulfone, aromatic sulfonic acid, and HCHO). The fabric showed good color fastness in water and seawater and no degradation during 6 h in H<sub>2</sub>O containing 30 ppm Cl at 30°.

IC ICM D06P003-82

ICS D04B021-18; D06P001-651; D06P003-02

CC 40-6 (Textiles and Fibers)

ST spandex fiber dyeing chlorine resistance; color fastness dyeing chlorine resistance; orthoformate polyurethane fiber dyeing; phenolic fixing agent dyeing polyurethane; dyeing polyamide

polyurethane chlorine resistance

IT Chemically resistant materials

(chlorine-resistant, dyed spandex-polyamide fabrics as)

IT Dyeing

(of spandex-polyamide fabrics, chlorine-resistant)

IT 140206-67-3, FK 707 140206-83-3, Nylon Super N

RL: USES (Uses)

(dye fixing by, in spandex-polyamide fabrics)

IT 3520-42-1, Solar Rhodamine B

RL: USES (Uses)

(dyeing by, of spandex-polyamide fabrics, chlorine-resistant)

IT 25038-54-4, Nylon 6, uses 111634-02-7

RL: USES (Uses)

(fiber, chlorine-resistant dyeing of)

IT 149-73-5, Trimethyl orthoformate 463-78-5D, Orthoformic acid, esters

RL: USES (Uses)

(in dyeing of spandex-polyamide fabrics, for chlorine resistance)

IT 1309-42-8, Magnesium hydroxide 1309-48-4, Magnesium oxide, uses

1314-13-2, Zinc oxide, uses 1344-28-1, Aluminum oxide, uses

12304-65-3, Hydrotalcite 20427-58-1, Zinc hydroxide

21645-51-2, Aluminum hydroxide, uses

RL: USES (Uses)

(spandex fibers containing, chlorine-resistant dyeing of)

IT 111634-02-7

RL: USES (Uses)

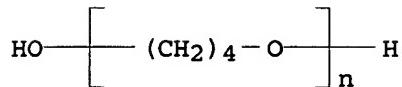
(fiber, chlorine-resistant dyeing of)

RN 111634-02-7 HCPLUS

CN 1,2-Propanediamine, polymer with α-hydro-ω-hydroxypoly(oxy-1,4-butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene], block (9CI) (CA INDEX NAME)

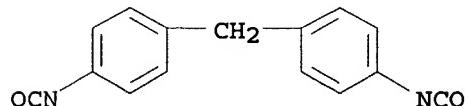
CM 1

CRN 25190-06-1  
 CMF (C<sub>4</sub> H<sub>8</sub> O)<sub>n</sub> H<sub>2</sub> O  
 CCI PMS



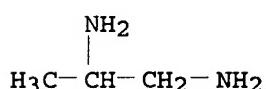
CM 2

CRN 101-68-8  
 CMF C<sub>15</sub> H<sub>10</sub> N<sub>2</sub> O<sub>2</sub>



CM 3

CRN 78-90-0  
 CMF C<sub>3</sub> H<sub>10</sub> N<sub>2</sub>



IT 12304-65-3, Hydrotalcite

RL: USES (Uses)

(spandex fibers containing, chlorine-resistant dyeing of)

RN 12304-65-3 HCAPLUS

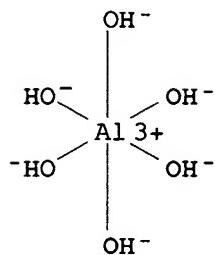
CN Hydrotalcite (Mg<sub>6</sub>(CO<sub>3</sub>)<sub>2</sub>(OH)<sub>4</sub>.4H<sub>2</sub>O) (9CI) (CA INDEX NAME)

CM 1

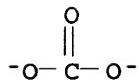
CRN 11097-59-9  
 CMF C O<sub>3</sub> . 2 Al H<sub>6</sub> O<sub>6</sub> . 4 H O . 6 Mg

CM 2

CRN 18893-33-9  
 CMF Al H<sub>6</sub> O<sub>6</sub>  
 CCI CCS



CM 3

CRN 3812-32-6  
CMF C O3

L21 ANSWER 44 OF 45 HCPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1993:451266 HCPLUS  
 DOCUMENT NUMBER: 119:51266  
 TITLE: Dyeing of fabrics containing polyurethane and polyamide or polyester fibers  
 INVENTOR(S): Ido, Yoshinori; Arimatsu, Giichi; Suzuki, Hajime; Chiba, Shuji  
 PATENT ASSIGNEE(S): Toyo Boseki, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05009877	A2	19930119	JP 1991-190957	19910704
PRIORITY APPLN. INFO.:			JP 1991-190957	19910704
AB The title fabrics prepared with polyurethane fibers containing 0.5-4.5% MgO, ZnO, Al2O3, Mg(OH)2, Zn(OH)2, Al(OH)3, and/or hydrotalcite are dyed in the presence of orthoformate esters, giving good color stability in chlorine-containing water. A fabric of elastic fibers of an MDI-1,2-propanediamine-PTMG copolymer containing 3% powdered MgO and nylon 6 fibers dyed with Solar Rhodamine B in the presence of tri-Me orthoformate showed no degradation during contact with H2O containing 30 ppm Cl at 30°.				
IC	ICM D06P001-651			
IC	ICS D04B001-18; D04B021-18			
CC	40-6 (Textiles and Fibers)			
ST	polyurethane dyeing chlorine resistance; polyamide dyeing chlorine resistance; polyester dyeing chlorine resistance; chlorine resistance dyeing spandex blend; orthoformate dyeing spandex chlorine resistance			
IT	Polyamide fibers, miscellaneous Polyester fibers, miscellaneous			

## Spandex fibers

RL: MSC (Miscellaneous)  
(dyeing of fabrics containing, chlorine-resistant)

IT Dyeing  
(of spandex-polyamide and spandex-polyester fabrics,  
chlorine-resistant)

IT 3520-42-1, Solar Rhodamine B

RL: USES (Uses)  
(dyeing by, of spandex blend fabrics, chlorine-resistant)

IT 25038-54-4, Nylon 6, uses 111634-02-7

RL: USES (Uses)  
(fiber, dyeing of fabrics containing, chlorine-resistant)

IT 149-73-5, Trimethyl orthoformate 463-78-5D, Orthoformic acid, esters  
RL: USES (Uses)

(in dyeing of spandex blend fabrics, for chlorine resistance)

IT 1309-42-8, Magnesium hydroxide 1309-48-4, Magnesium oxide, uses  
1314-13-2, Zinc oxide, uses 1344-28-1, Aluminum oxide, uses  
12304-65-3, Hydrotalcite 20427-58-1, Zinc hydroxide  
21645-51-2, Aluminum hydroxide, uses

RL: USES (Uses)  
(spandex fibers containing, chlorine-resistant dyeing of)

IT 111634-02-7

RL: USES (Uses)  
(fiber, dyeing of fabrics containing, chlorine-resistant)

RN 111634-02-7 HCPLUS

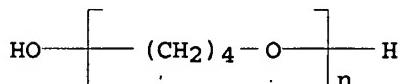
CN 1,2-Propanediamine, polymer with  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene], block (9CI) (CA INDEX NAME)

CM 1

CRN 25190-06-1

CMF (C<sub>4</sub> H<sub>8</sub> O)<sub>n</sub> H<sub>2</sub> O

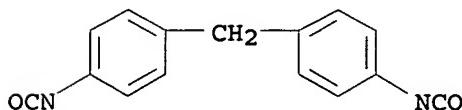
CCI PMS



CM 2

CRN 101-68-8

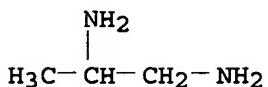
CMF C<sub>15</sub> H<sub>10</sub> N<sub>2</sub> O<sub>2</sub>



CM 3

CRN 78-90-0

CMF C<sub>3</sub> H<sub>10</sub> N<sub>2</sub>



IT 12304-65-3, Hydrotalcite

RL: USES (Uses)

(spandex fibers containing, chlorine-resistant dyeing of)

RN 12304-65-3 HCAPLUS

CN Hydrotalcite ( $\text{Mg}_6(\text{CO}_3)[\text{Al}(\text{OH})_6]_2(\text{OH})_4 \cdot 4\text{H}_2\text{O}$ ) (9CI) (CA INDEX NAME)

CM 1

CRN 11097-59-9

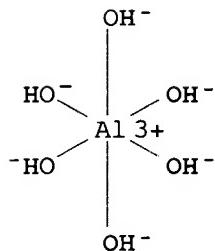
CMF C O3 . 2 Al H6 O6 . 4 H O . 6 Mg

CM 2

CRN 18893-33-9

CMF Al H6 O6

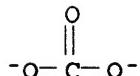
CCI CCS



CM 3

CRN 3812-32-6

CMF C O3



L21 ANSWER 45 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1992:176015 HCAPLUS

DOCUMENT NUMBER: 116:176015

TITLE: Polyurethane compositions with good  
resistance to chlorine-containing water

INVENTOR(S): Yoshizato, Akihiko

PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

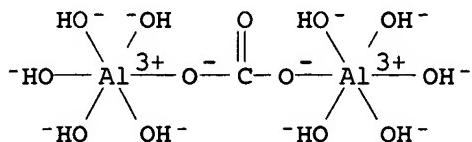
## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03292364	A2	19911224	JP 1990-92986	19900410
JP 2887402	B2	19990426		
PRIORITY APPLN. INFO.: JP 1990-92986 19900410				
AB	The title compns. for elastic fibers, etc., contain 0.1-10% (based on polyurethane) higher fatty acid- and/or silane coupling agent-treated hydrotalcites with average size $\leq 1 \mu\text{m}$ . Thus, polymerization of 133.3 parts poly(tetramethylene glycol) and 31.2 parts MDI at 95° for 90 min and treating the resulting prepolymer with 2.34 parts ethylenediamine and 0.37 part Et <sub>2</sub> NH gave a polyurethane solution, which was mixed with TiO <sub>2</sub> 4, 4,4'-butylidenebis(3-methyl-6-tert-butylphenol) 2, 2-(2-hydroxy-3-tert-butyl-5-methylphenyl)-5-chlorobenzotriazole 0.7, and octadecanoic acid-finished Mg <sub>4.5</sub> Al <sub>2</sub> (OH) <sub>13</sub> CO <sub>3</sub> .3.5H <sub>2</sub> O (average size 0.5 $\mu\text{m}$ ) 1%. The solution was melt spun, dyed, and finished with tannin to give fibers showing strength halving time 68 h when immersed in 3 ppm NaClO, vs. 29 h for a control using nontreated hydrotalcite.			
IC	ICM C08L075-04 ICS C08K009-04			
CC	40-2 (Textiles and Fibers)			
ST	spandex fiber chlorine resistance; polyurethane elastic fiber chlorine resistance; hydrotalcite chlorine discoloration inhibitor spandex			
IT	Spandex fibers RL: USES (Uses) (chlorine discoloration inhibitors for, fatty acid- or silane-treated hydrotalcites as)			
IT	Fatty acids, uses Silanes RL: USES (Uses) (hydrotalcites treated with, chlorine discoloration inhibitors, for spandex fibers)			
IT	Coupling agents (silanes, hydrotalcites treated with, chlorine discoloration inhibitors, for spandex fibers)			
IT	Discoloration prevention (agents, hydrotalcites, fatty acid- or silane-treated, for spandex fibers)			
IT	89140-36-3 98036-77-2, Aluminum magnesium carbonate hydroxide (Al <sub>4</sub> Mg <sub>9</sub> (CO <sub>3</sub> ) <sub>2</sub> (OH) <sub>26</sub> ) 140392-96-7, Aluminum magnesium carbonate hydroxide (Al <sub>2</sub> Mg <sub>4.2</sub> (CO <sub>3</sub> )(OH) <sub>12.4</sub> ) RL: USES (Uses) (fatty acid- or silane-treated, chlorine discoloration inhibitors, for spandex fibers)			
IT	9053-66-1, Ethylenediamine-MDI-poly(tetramethylene glycol) copolymer 140144-12-3 RL: USES (Uses) (fibers, spandex, chlorine discoloration inhibitors for, hydrotalcites as)			
IT	57-10-3, Hexadecanoic acid, uses 57-11-4, Octadecanoic acid, uses 1067-53-4 4420-74-0 5575-48-4 13822-56-5 83048-65-1 RL: USES (Uses) (hydrotalcites treated with, chlorine discoloration inhibitors, for spandex fibers)			
IT	89140-36-3 98036-77-2, Aluminum magnesium carbonate hydroxide (Al <sub>4</sub> Mg <sub>9</sub> (CO <sub>3</sub> ) <sub>2</sub> (OH) <sub>26</sub> ) RL: USES (Uses) (fatty acid- or silane-treated, chlorine discoloration inhibitors, for			

spandex fibers)

RN 89140-36-3 HCAPLUS

CN Aluminate(6-), [ $\mu$ -[carbonato(2-) -O-O']]decahydroxydi-, magnesium (1:3) (9CI) (CA INDEX NAME)



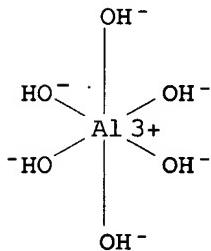
● 3 Mg<sup>2+</sup>

RN 98036-77-2 HCAPLUS

CN Aluminate (Al(OH)63-), (OC-6-11)-, magnesium carbonate hydroxide (4:9:2:2)  
(9CI) (CA INDEX NAME)

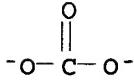
CM 1

CRN 18893-33-9  
CMF Al H6 O6  
CCI CCS



CM 2

CRN 3812-32-6  
CMF C 03



IT 9053-66-1, Ethylenediamine-MDI-poly(tetramethylene glycol)  
copolymer 140144-12-3  
RL: USES (Uses)  
(fibers, spandex, chlorine discoloration inhibitors for, hydrotalcites  
as)

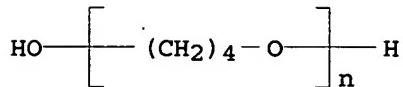
RN 9053-66-1 HCAPLUS

CN 1,2-Ethanediamine, polymer with  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX)

NAME)

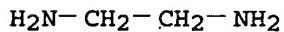
CM 1

CRN 25190-06-1  
 CMF (C<sub>4</sub> H<sub>8</sub> O)<sub>n</sub> H<sub>2</sub>O  
 CCI PMS



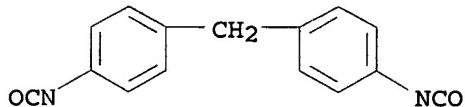
CM 2

CRN 107-15-3  
 CMF C<sub>2</sub> H<sub>8</sub> N<sub>2</sub>



CM 3

CRN 101-68-8  
 CMF C<sub>15</sub> H<sub>10</sub> N<sub>2</sub> O<sub>2</sub>



RN 140144-12-3 HCPLUS

CN Carbonic acid, polymer with 1,2-ethanediamine, 1,6-hexanediol, 1,1'-methylenebis[4-isocyanatobenzene] and 1,5-pentanediol (9CI) (CA INDEX NAME)

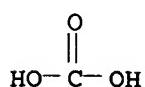
CM 1

CRN 629-11-8  
 CMF C<sub>6</sub> H<sub>14</sub> O<sub>2</sub>



CM 2

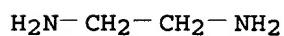
CRN 463-79-6  
 CMF C H<sub>2</sub> O<sub>3</sub>



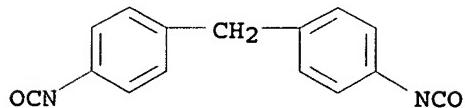
CM 3

CRN 111-29-5  
CMF C5 H12 O2

CM 4

CRN 107-15-3  
CMF C2 H8 N2

CM 5

CRN 101-68-8  
CMF C15 H10 N2 O2

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